

TenneT Holding B.V.

Integrated Annual Report 2023



**Energising today
and tomorrow**

Key figures 2023

Overarching indicators

80%*
Internal Engagement Index

7.8**
Reputation survey



Secure supply today and tomorrow

99.99993% Target: 99.99962%
Onshore grid availability
Grid availability

7,730 Target: 6,278
Future proof grid
Investments (in EUR million)



Drive the energy transition

33%
Environmental impact
% Greened of our carbon footprint (location-based)

12.2 GW Target: 11.5 GW by 2023, 43.1 GW by ~2030
Offshore grid connection capacity
Offshore capacity in operation (in GW)



Energise our people and organisation

4.5 Target: 4.3
Safe workforce
TRIR group (including contractors)

32% Target: 30%¹
Diverse workforce
¹ % female inflow of total inflow
² % non-Dutch / non-German hires

11% Target: 10%²

NL 3.9, DE 3.4
Healthy workforce
Absentee rate the Netherlands and Germany



Safeguard our financial health

1,709 Target: 1,386
Healthy financial operations
Adjusted underlying EBIT group (in EUR million)***

5.8% Target: 4.2%
Satisfied capital providers
ROIC group (%)***

11.6% Target: 8.5%
Safeguarded capital structure
Adjusted FFO/Net debt (%)***



* The latest employee survey was performed in 2021. In 2023, we decided to update the way we monitor this and will report accordingly in our next annual report.
** Our reputation survey is executed every 2 years. The most recent survey was performed in 2022.
*** Reference is made to the chapter 'Safeguard sustainable financial performance'.

In this year's report



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* These sections reflect the director's report as mentioned by Part 9 of Book 2 of the Dutch Civil Code.

** These sections reflect the Other Information as required by Part 9 of Book 2 of the Dutch Civil Code.

At a glance 2023

Building the green powerhouse in Europe

TenneT awarded framework agreements regarding our 2GW project, which includes building onshore and offshore converter stations as well as transport and installation of the offshore platforms. The aim is to deliver the first fourteen 2 GW offshore grid connection systems until 2031, six to Germany and eight to the Netherlands.



Three offshore grid connections ready

The Dutch grid connections for offshore wind farm Hollandse Kust (noord) and Hollandse Kust (west Alpha) are officially ready for commissioning. In Germany, TenneT has commissioned the 900 MW DoWin6 offshore grid connection, bringing the total transmission capacity in the North Sea to 12.2 GW in total.



Work begins on key North-South DC connections SuedLink and SuedOstLink

After an extensive planning and approval phase, the construction of SuedLink and SuedOstLink, two key projects in Germany's energy transition, has started.

Announcement of LionLink

TenneT and National Grid Ventures announced plans for a first-of-its-kind electricity link that will connect offshore wind energy between the Netherlands and the UK. LionLink could connect Dutch wind farms to the electricity grids of both countries via a subsea high voltage cable, called a multi-purpose, or hybrid, interconnector.



Solid financing position

In June 2023, the Dutch state has provided EUR 1.6 billion to cover the funding requirements of the Dutch part of TenneT. TenneT and the Dutch state have made arrangements in 2024 regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025.

New electricity highway connections in operation

TenneT has completed the approximately 140 kilometres long Westküstenleitung from Brunsbüttel via Heide to the Danish border. Furthermore, we completed Ganderkesee-St.Hülfe and commissioned a new 40 kilometre high-voltage connection between Eemshaven and high-voltage substation Vierverlaten.



Announcement Target Grid

TenneT has announced its Target Grid, TenneT's vision of an integrated, onshore and offshore, cross-border electricity grid, which is crucial to the climate-neutral energy system in 2045.



Maarten Camps and Kuldip Singh join Supervisory Board of TenneT

With effect from 1 September 2023, Maarten Camps and Kuldip Singh were appointed by caretaker Finance Minister Sigrid Kaag as members of TenneT's Supervisory Board. Both were nominated by the Supervisory Board of TenneT Holding B.V. Laetitia Griffith's appointment term as Supervisory Board member ends after more than eight years.

Clean and emission-free future

Emphasising CO₂ reduction, TenneT targets powering all its contracted factories with green electricity by 2030 via Power Purchase Agreements (PPAs). In 2023, TenneT engaged with a polyethylene (PE) supplier for cable manufacturers. Their focus includes three CO₂-reducing approaches: mechanical recycling, scaling a pilot plant for chemical recycling, and exploring challenges in supplying biobased feedstock.

1,402 new employees

In 2023, TenneT attracted 1,402 new employees with different nationalities and backgrounds of which 32% are female, growing to a workforce of over 8,300. The growth of the company's workforce is necessary, as the energy transition significantly impacts our people's workload. The war on talent is persistent, also at our contractors and suppliers.

Grid congestion in the Netherlands requires far-reaching measures

The ever-increasing pace of demand for additional transmission and connection capacity is exceeding the speed at which grid operators can expand the electricity grid. Grid operators signal that the access to the electricity grid will come under further pressure. Together with stakeholders and the government action and far-reaching measures were announced to avoid congestions.



Letter from the board



Executive Board (fltr): Tim Meyerjürgens, Chief Operating Officer - Manon van Beek, Chief Executive Officer, Arina Freitag, Chief Financial Officer - Maarten Abbenhuis, Chief Operating Officer

Energising today and tomorrow

The year 2023 has shown us that international, societal, economic and political stability is under pressure. Running an organisation in ambiguous times is the new normal. The war in Ukraine, the Israeli-Palestinian conflict, the economic downturns and rising cost of living created widespread uncertainty. For TenneT, as we strive to create a reliable carbon-neutral energy system in 2045, it proved to be a year with many dimensions. It is clear that the roadmap towards sustainable prosperity is not linear nor clearly signposted. However, it's a journey TenneT is prepared for and, although there's a need for realism, we have concrete plans based on a vision of the energy system in 2045 for the required grid expansion in Germany and the Netherlands. Focus on execution is key to achieve national and European climate goals.

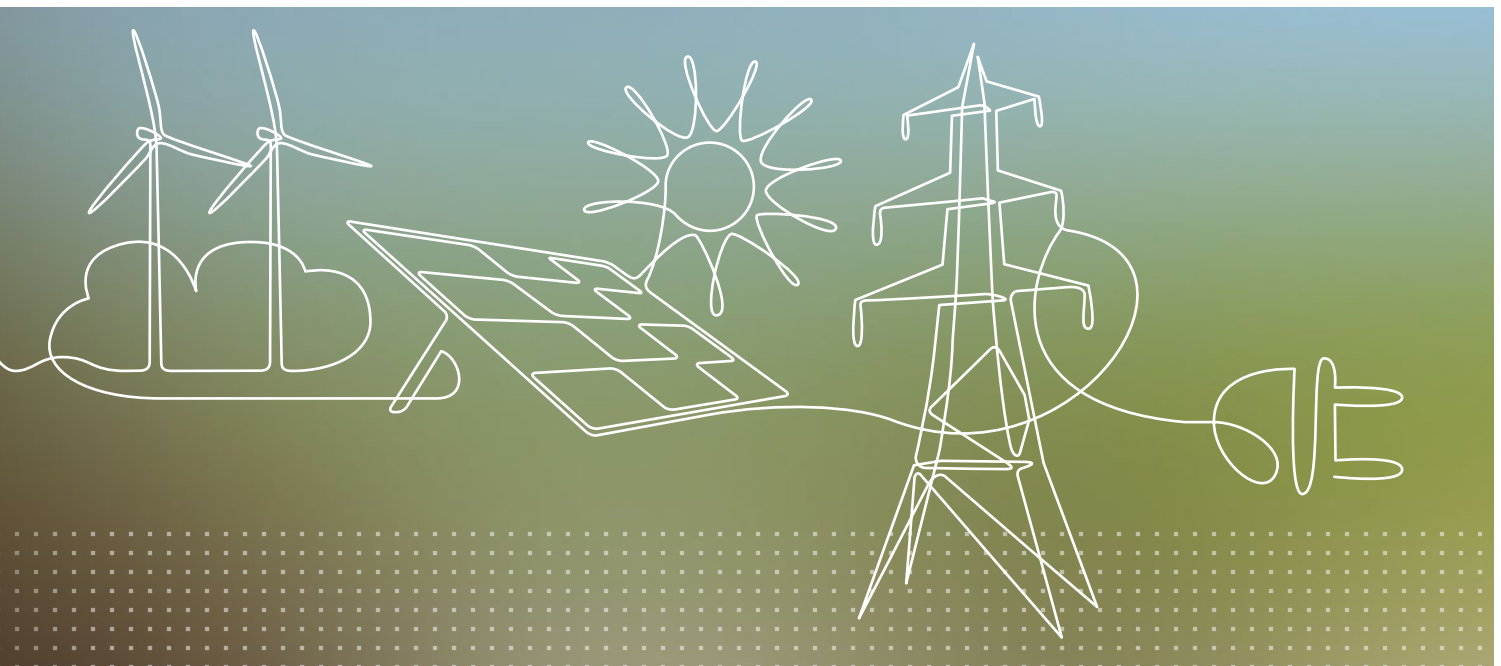
Reliable, affordable and sustainable

As we work towards these targets, TenneT continued to fulfil its responsibility for grid availability, reaching 99.99993% in 2023. Looking at 2024 and beyond, a supply-secure and independent electricity system that is affordable, reliable and sustainable, remains the ultimate balance to achieve. This requires strong leadership, a collaborative mindset and a consistent energy policy that enables the whole energy sector to grow and make the needed investments. Affordability, as part of the energy trilemma, is gaining importance and center of the societal debate on energy transition. TenneT also attaches great importance to the affordability of the future energy system, which translates, for example, into forward-looking and

smart strategies such as Target Grid that allows a programmatic approach, standards and more efficiencies in the expansion of the grid.

Safety needs our energy

Especially in these times of steeply growing investments, working safely and always feeling safe to address colleagues and partners and to be addressed on safety are paramount company values. Safe operations and safety for the environment in which we work, and all stakeholders involved in our many projects are number one at TenneT. Realising the necessary expansions to our grids as soon as possible can never compromise safety. Although we have made good strides in 2023, safety continues to require 100 percent attention. TenneT's Total Recordable Incident Rate (TRIR) is stagnating and does not match our ambition of



achieving 'Zero Harm' among all our employees and all our contractors and subcontractors. Our clear life-saving rules were too often violated, leading to high-risk incidents. Since our efforts are aimed at achieving a situation where people always adhere to the Life-Saving Rules, we will put more emphasis on better and faster root cause analyses to learn and improve from reported violations of the Life-Saving Rules.

Our vision in action

To achieve an electricity grid that enables a reliable climate-neutral energy system in 2045, we need to work, think and act differently. The task before us is feasible, but it will not be achieved by working in the same way as we have done before, by identifying short-term bottle necks in the system and solving them step by step or project by project. Our Target Grid 2045 strategy, which TenneT launched in April 2023, gives us a clear, common goal: an electricity grid that must be ready by 2045 for an energy secure and independent electricity system. Based on internationally agreed scenario's and using a back-casting approach we already know most of what must happen. It also allows us to start the crucial preparations now – there's no time to lose. In line with wider European policy plans, Target Grid envisages the North Sea as the primary source of energy using offshore wind as the green powerhouse for the Netherlands, Germany and other European countries.

One of the key innovations needed to realise this offshore energy ambition is hybrid interconnection. Together, these

interconnectors form a meshed high voltage direct current (HVDC) infrastructure that can connect offshore wind farms to energy markets in multiple countries. This approach will strengthen security of supply and European energy independence, and make the future energy system more resilient, efficient and affordable. TenneT's world-first 2GW standard for HVDC offshore connections is a crucial innovation that enables this, allowing larger wind farms to be connected to the grid with fewer platforms.

Over the past year, constructive discussions have taken place between TenneT and KfW, acting on behalf of the German state, with close involvement of the German state and the Dutch state as TenneT's sole shareholder. To the date of this letter, no agreement has been reached yet on the potential sale of German activities. TenneT and KfW continue their discussions in the coming period, however it is not certain that a deal will be reached. In 2024, TenneT and the Dutch state have made arrangements regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress. Further reference is made to the section "[Future Forward: a potential sale of TenneT Germany](#)".

The first 2GW platforms to be installed in the period until 2031 will be hybrid ready: this means that they are already designed as a hub to be connected to the meshed offshore HVDC grid of the future. Target Grid and our 2GW Program are examples of exponential, unconventional, future-ready thinking. This is a shift from linear to non-linear thinking, planning and developing, which no longer fits the huge task that we, together with society, need to accomplish. Our next challenge and task is to standardise this way of thinking and working in everything we do.

“More speed is needed to expand the electricity grid.”

Focus on executing our projects

We invested EUR 7.7 billion in 2023 and this was more than we planned for, mainly due to investments regarding the 2GW Program. Our focus on our promise to speed up our construction pipeline, on land and at sea, is bearing fruit, with significant progress in 2023. After years of preparations in Germany, we started constructing the two crucial north-south HVDC corridors, SuedLink and SuedOstLink – each over five hundreds of kilometres long. During the year, we also completed the 140 kilometre long Westküstenleitung, the 61 kilometre long high-voltage connection Ganderkesee - St. Hülfe and, in the Netherlands, we completed a 40 kilometre electricity highway between Eemshaven and Groningen. Our work is also accelerating offshore. TenneT completed new grid connection systems for large offshore wind farms, Hollandse Kust (noord) and Hollandse Kust (west Alpha) (both 700 MW) and DoIWin6 (900 MW). Research into the feasibility of two new submarine interconnectors, one between the Netherlands and the United Kingdom (LionLink), and the other from Germany to Norway, were announced. These interconnections are particularly significant as they will have a hybrid function, connected to offshore wind farms along the way. This is the tangible start of a European HVDC grid, part of Target Grid.

The hugely accelerated electrification of society is a positive sign of the energy transition, but it also leads to long waiting times to be connected, especially at our regional 110-150 kV grids in the Netherlands. Unfortunately, this will remain a critical situation for the time being. Through the National Grid Congestion Action Plan (LAN), grid operators and government are working closely together to solve grid congestion through a combination of faster permitting and construction, better utilisation of existing infrastructure and by relying on parties to make contracted flexibility available to others.

Due to persistent numerous bottlenecks in the German onshore electricity grid, power from large wind farms in the North Sea must increasingly be scaled back. More speed is therefore needed to expand the electricity grid, for example by building electricity highways.

Looking ahead the European energy transition is unfolding at pace. We anticipate our investments to add up to approximately EUR 160 billion in the coming ten years and will reach at least EUR 10 billion in 2024. For the period until 2045, TenneT plans to construct over 4,800 kilometres of new grid connections on land and at sea in Germany, and 2,500 kilometres in the Netherlands. This requires hundreds of new transformers and dozens of new high-voltage substations. As we build an integrated offshore grid, our current onshore grid will also expand significantly. Space to develop energy infrastructure should be reserved by regional and national governments as soon as possible. Offshore wind is a key electricity source in Europe's decarbonisation plans. The first Offshore Network Development Plan in the North Seas envisages 320 GW of installed wind power by 2050 in the North Seas Energy Cooperation (NSEC) countries and host country, the United Kingdom. TenneT's share of this is envisaged at approximately 70 GW in the Netherlands and roughly between 30 and 40 GW in Germany. TenneT alone is committed to connecting over 40 GW of offshore wind in the Netherlands and Germany.

Working together by definition

The unprecedented long-term framework agreements that TenneT signed with key suppliers in 2023 to develop HVDC infrastructure are a prime example of intense and far-reaching cooperation. These agreements entail grid connection systems (cables, converter stations) for our offshore 2GW Program, and power transformers and compensation coils to build and modernise substations on land. With these agreements worth tens of billions of euros, new economies of scale and technical standardisations can be achieved.

These are also examples of exponential, unconventional thinking and acting. With these, TenneT secures capacity with suppliers and ensures timely delivery of crucial components. The framework contracts provide our suppliers with the certainty and predictability they need to invest in the additional resources needed. This long-term certainty is also critical for TenneT, as we compete in an energy market tightened by a shortage of suppliers, talent and resources.

Close to society and our people

To achieve the energy transition, we want to take all stakeholders with us on this journey: governments on various levels, suppliers, NGO's, industries and all citizens. This year more than ever before we have noticed that citizens are mostly supportive of the need for climate action, but when TenneT becomes active in their local area, we encounter more resistance. Of course, we understand that our large projects can have a significant impact on the living environment. But we also cannot escape the reality that we need to expand our electricity grids to maintain security of supply and facilitate sustainable growth for society. We face increasing negotiations with provinces, local residents and time-consuming legal procedures.

This also presents a task for TenneT. To improve mutual understanding, ensure timely decision-making and create support for our work, we have significantly increased our communication and cooperation efforts with local and regional stakeholders. In 2023, we held well over 1,000 meetings with our stakeholders.

Our great thanks go to all our stakeholders for working together in 2023: very good and open cooperation where possible, critical where necessary and always with the energy transition in sight. Our firm belief that we will only get there, if we all get there is starting to gain traction. We wholeheartedly thank all our partners and our 8,336 internal and external employees of more than 70 different nationalities for their courage, connection and ownership that led to our achievements in 2023 that we can be proud of. They really energise today and tomorrow and work tirelessly to maximise the utilisation of our existing assets, increase our grid capacity and develop a reliable climate-neutral energy system by 2045 that supports a prosperous future for people and businesses.

A wholehearted thank you!

On behalf of TenneT's Executive Board,
Manon van Beek (CEO)

Future Forward: a potential sale of TenneT Germany

For already 25 years, TenneT has built, maintained and operated the high-voltage electricity grid with the highest level of grid availability, while fulfilling our legal investment obligations to prepare the grid for a climate-neutral energy system.

In 2010, TenneT further boosted the integration of the European electricity market by combining Dutch and German activities and becoming the first ever cross-border TSO. Since, TenneT has become one of the largest investors in offshore wind connections and taking a leading role in the European energy transition. At the same time, the political developments and rapid acceleration of the energy transition in the last few years require an extraordinary amount of capital investments, e.g. to fund grid expansion projects or new offshore grid connection systems. These capital investments are partly covered by (green) debt financing and partly by shareholder equity. In addition to this, both the German and Dutch governments have indicated their preference to control, own and fund, (only) their own national electricity infrastructure. Acknowledging this, TenneT has started to explore different scenarios that would answer to both needs.

Start of negotiations and conditions

In February 2023, TenneT started to explore the potential sale of German activities to the German state. This sale would not only secure the national funding for the extensive investment programme in both countries, but also create two strong national players that could continue to work together to drive forward the energy transition. Over the past year, constructive discussions have taken place between TenneT and KfW, acting on behalf of the German state, with close involvement of the German state and the Dutch state as TenneT's sole shareholder. The Dutch government supports the sale of German activities, provided that 1) the continuity of business is guaranteed; 2) key synergy benefits are preserved; and 3) it is on a market-based price that reflects the value of the company.

Current status and reporting implications

To the date of this report, no agreement has been reached yet on the potential sale of German activities. TenneT and KfW continue their discussions in the coming period, however it is not certain that a deal will be reached. TenneT considers that it is highly probable that a transaction will be concluded in 2024. In the consolidated financial statements the IFRS 5 'Assets held for sale' standard is applied, which implies that the German activities are no longer continued per 31 December 2023. Next to the financial statements, the Integrated Annual Report is not affected.

Until a final decision is made, TenneT continues to operate as one integrated company. Our unique growth agenda as a TSO, to meet Dutch and German national and Europe's climate targets, is an indication of the substantial work that still needs to be done.

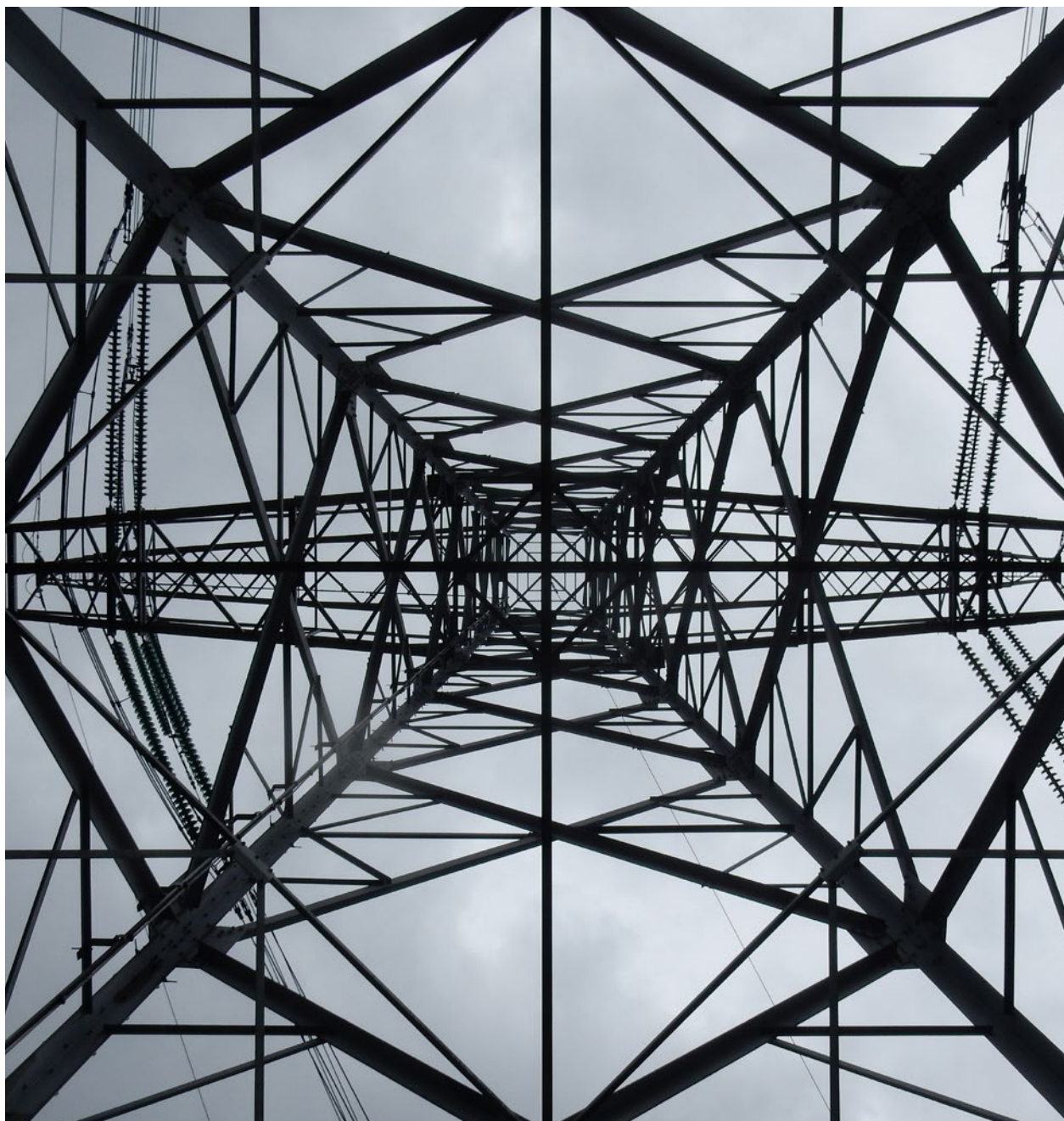
Loan facility

While the negotiations on the sale of TenneT Germany continue, so does our work regarding large-scale grid expansions onshore and offshore. To realise our planned investments, we need to have funds readily available. For this, TenneT and the Dutch state have made arrangements in 2024 regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress.

In May 2023, TenneT secured a sustainability-linked term loan facility with a consortium of banks of EUR 8 billion with a term of 2.5 years. In addition, in June 2023, the Dutch state provided EUR 1.6 billion to cover funding requirements for TenneT's investments in the Netherlands. This contribution and loan facilities enable us to continue doing our work, while continuing the negotiations on the potential sale.

Disentanglement of the organisation

To prepare for a potential disentanglement of our organisation, in May 2023 TenneT has started to identify what changes are required on an organisational level. Always taking into account both the Dutch and German perspective, we worked together in workstreams to identify potential risks in case of a split and prepare for a future in which we would operate as two national entities. These preparations are necessary to ensure a smooth transition later on, but in no way interfere with the execution of our investment agenda on full speed.



About TenneT



Profile

With over 25,000 kilometres of high-voltage connections both onshore and offshore, our role as a Transmission System Operator (TSO) is to ensure a secure supply of electricity to over 43 million end-users, in the Netherlands and a large part of Germany, and to create the infrastructure needed to secure supply today and tomorrow.

Our core tasks

Our primary tasks are to provide power transmission services, system services and facilitation of the electricity market. These tasks follow from our role as grid operator under the Dutch and German energy laws, the 'Elektriciteitswet' (E-wet) and the German 'Energiewirtschaftsgesetz' (EnWG).

Transmitting electricity

Power transmission services mean that our role is to transmit electricity via our electricity grid. This is the backbone of the electricity supply system. We transmit electricity from where it is generated by other parties, either on land or at sea or imported from other markets. Electricity is transmitted to our customers via our high voltage grid, being 110 kV and higher in the Netherlands and 220 kV and higher in Germany. As electricity is often generated far away from where it is used, we need to transmit it over large distances without incurring major losses on the way. To achieve this, we transmit electricity at very high voltages.

System services

System services refers to our role in carefully managing the balance between the supply and demand of electricity and to keep the frequency at a constant level (50 Hertz). To do this, we have control centres in the Netherlands and in Germany, where supply and demand are monitored and controlled 24 hours a day, seven days a week providing security of supply.

Market facilitation

In addition, we ensure that European electricity markets are set up in an efficient manner, enabling a liquid market where consumers can rely on security of supply at an affordable price. To this end, we build and operate for instance interconnections (such as NorNed, NordLink, BritNed and the COBRACable), to create possibilities to import and export electricity. We also work together with other European TSOs and electricity markets to guarantee grid reliability and to balance supply and demand across borders and markets.

Driving the energy transition

The energy system is increasingly dependent on renewable sources. But renewables are, by nature, intermittent – the sun does not always shine and the wind does not always blow. This calls for a change in the system. TenneT, together with its stakeholders, is working to address these challenges, for example with the battery-storage of electricity to safeguard the balance between supply and demand in the future. We build grids that integrate new energy sources and unlock flexibility, both onshore and offshore.

Our role in Europe

By 2050, Europe aims to become the world's first climate-neutral continent. TenneT, along with European governments and other energy parties, are key to making this ambition a reality. In the transition to a climate-neutral continent, the transition of the electricity system is an important element to ensure that society has a sustainable supply of energy. Governments in the areas we serve have formulated ambitions to support Europe's climate targets, with the German government aiming for climate neutrality in 2045 and the Dutch government in 2050.

As a key player in the energy market, we strive to share our insights to integrate and switch to more renewable energy sources to power society, while aiming to ensure that we are able to keep the lights on at all times. We are making sure that both offshore and onshore electricity can be integrated into the grid properly, for example by reinforcing, renewing and greatly expanding our network. To reach these goals, we launched our Target Grid vision, the picture of our electricity grid, needed to operate a climate-neutral energy system in 2045. More information on this can be found on page 18.

TenneT is one of Europe's largest investors in national and cross-border electricity transmission capacity on land and at sea, bringing together the Northwest European energy markets and efficiently unlocking large-scale renewable electricity sources. We collaborate with a wide range of partners in the energy market to develop and apply new, smart technologies and to contribute to the energy transition in the future.

Key developments in the environment we operate in

The urgency and complexity of tackling climate change means that TenneT operates in a challenging context that is continuously developing. We see the following developments that affect us:

Climate change and the energy transition

Climate change is one of the most urgent and complex societal challenges of our times, of which many scientists explain the increased occurrence of weather extremes as being caused by climate change. To mitigate the most adverse impacts of climate change, governments are stepping up their climate ambitions to build a net zero economy by 2050. To accommodate this, we are redesigning the current energy system and how we operate it, planning ahead and building a climate-neutral energy system. Changing weather and climate patterns, such as storms, floods and droughts, can also affect our transmission system, which needs to be more resilient to a variety of different external circumstances.

Scarcity of resources

A key development and challenge we foresee as we drive the energy transition is the availability of key resources, such as raw materials, manufactured components and qualified staff. In the market, there is an increased demand related to the energy transition, which could lead to a shortage of materials, most notably aluminium, copper and steel, as well as manufactured products, such as components for HVDC (high-voltage direct current) systems. There are some expectations that at the end of this decade, the supply of scarce resources is not able to meet demand. That is why we are investing in long-term contracts with our partners to safeguard our needs for materials. We are also collaborating with them to achieve our circular ambition. As regards the scarcity of human capital, difficulties in the labour market are visible in many more sectors in the recent years. A shortage of available staff at all levels is becoming more challenging, and this has an impact on TenneT as we strive to fulfil our critical investments for the energy transition. In general, scarcity of resources may cause project delays and rising costs and in the broader context sustainability goals.

Higher costs of materials and energy

In 2023, the economies in the areas we serve and the markets where we procure our goods and services have been affected by rising costs of resources and services. This has a significant effect on the cost of our investment projects. On the wholesale energy market, we faced high electricity prices. In general, high energy prices have an effect on the costs of ancillary services such as redispatch (as we compensate producers of electricity for curtailed generation or infeed) and grid losses.

Speeding up the demand for capacity leads to congestion

In the Netherlands, the ever-increasing pace of demand for additional transmission and connection capacity is exceeding the speed at which we, and our colleague grid operators, can expand the electricity grid. Although work on the grid is advancing in all regions, the billions of euros in investments we are making, alongside additional measures, are still not enough to meet demand, at such short and often immediate notice. Grid operators signal that the Netherlands is entering the next phase, where access to the electricity grid will come under further pressure leading to pressure on both sustainability goals and economic development. This calls for a serious acceleration of electricity grid expansion. In addition, grid operators and the government are taking additional measures to keep the electricity grid accessible and reliable. Examples include mandating smart charging stations, controllable heat pumps, and mandatorily unloading the grid at peak times. The changing energy system also requires different behaviour from end-users, for example by using the grid more when the supply of energy is high.

Also in Germany, we noticed that due to persistent numerous bottlenecks in the onshore electricity grid, power from large wind farms in the North Sea must increasingly be scaled back. More speed is therefore needed to expand the electricity grid, for example by building electricity highways.

Our stakeholders

To deliver on our promise and ambitions, we believe that it is essential to work together with stakeholders and through partnerships: we only get there if we all get there. Through our activities as a TSO, we are already continuously interacting with the world around us. Our activities could not take place without the often intensive co-operation with other key players, inside and outside the energy sector. We aim to build and maintain good relationships with our stakeholders and co-operate with them in partnerships to deliver on our strategic objectives.

We determined our stakeholder landscape by identifying the most important stakeholder groups, based on their influence on us and our influence on them. We also engaged with these stakeholder groups to gather their views on the Sustainable Development Goals (SDGs) that relate most to us as an organisation and the topics related to the impact we as TenneT have on the world around us.

To monitor the way we are perceived and how we are performing, we perform a reputation survey among our key stakeholders every two years. The most recent survey was completed in 2022 and resulted in a score of 7.8, which was classified as 'strong' and is higher than the average of companies included in this survey (7.4).

Engaging with our stakeholders is crucial in achieving our strategic goals and serving our role in society. We value the engagement with local communities in our service areas and specifically in the areas where our assets are located, now and in the future. In 2023 we invested in our stakeholder management on regional and local level, as the energy transition starts there.

This will help us to build and maintain the critical infrastructure required to facilitate the energy transition. It remains crucial to engage with local communities, but also with NGOs and politicians at the earliest stage of a project to address their concerns and gain their understanding. As we expand our network, we must do so responsibly, by engaging with them and gaining acceptance with local communities.

Podcast with stakeholders

We are actively engaged in conversations with stakeholders in our own podcast. You can listen back via tennet.eu/podcast (Dutch) or tennet-energiedialog.eu (German).



Dutch



German

Our strategy

TenneT has a clear purpose: to connect everyone with a brighter energy future. We strive to secure the supply of electricity for the people living in the areas we serve, while enabling the changing energy landscape with all its challenges, day in and day out. The way we achieve this is not driven by just our own views on how to achieve our purpose. We are a key and inter-linked player in the energy landscape, working closely with other important stakeholders to drive the energy transition and ensure a greener and brighter energy future in the best and most efficient manner.

To ensure we are able to fulfil our purpose, we have developed our current TenneT strategy, based on four strategic pillars, with goals for 2025.

This is focused on ensuring we are able to secure supply of electricity today and tomorrow by preparing our grid for a future and climate-neutral energy system, while also maintaining our financial health and considering the care for our current and future employees and others working for and with us.

Our strategy drives us to realise a climate-neutral, affordable and reliable future electricity grid and enables us to act as a key player in Europe's energy transition, contributing to the mitigation of climate change and to the United Nations Sustainable Development Goals.

Our vision for the future electricity grid was launched in 2023. Our Target Grid 2045 strategy sets out how this system will look and which strategic actions are required to get there. Our 2025 strategic goals are our first milestones towards this end-picture. More on Target Grid is included on the next page.

Strategic goals



Energise our people and organisation

With an inclusive and safe environment where people enjoy coming to work. We will evolve our leadership model to empower, inspire and create growth opportunities, so everyone can perform at their best and work as one team.

- Provide a great and safe place to work for up to 10,000 internal and external employees striving for Zero Harm.



Secure supply today and tomorrow

By maintaining the grid to meet reliability targets and operating it effectively. We will design solutions to balance electricity supply and demand in the future, while meeting societal objectives and realising our infrastructure projects as promised.

- Deliver at least EUR 10 billion per year in projects while securing our supply chain.
- Secure healthy asset base with sufficient transmission and connection capacity.
- Maintain 99.99% reliability.



Drive the energy transition

As a green grid operator and thought leader, developing innovative solutions and playing a key role in the energy data world.

- Realise at least 5 significant energy system innovations.
- Deliver robust design Target Grid 2045 including accepted North Sea grid design.



Safeguard our financial health

By ensuring a regulatory framework to support our strategy and by delivering a return in line with what our capital providers expect, as well as by raising the necessary external financing.

- Raise adequate amount of equity to assure our strong credit ratings of at least A3/A-.
- Achieve regulatory returns.
- Reduce the OPEX deficit.

Listening to our stakeholders

At TenneT, we consider a good relationship and dialogue with our stakeholders to be essential. The energy transition cannot be tackled alone and requires close cooperation. In our reputation survey, we explicitly ask stakeholders every two years how they view us, also to learn from them and to improve ourselves. Stakeholder statements sometimes ask for this as well. Here are a few statements stakeholders made about TenneT in 2023.



Councillor Alexander Sprong (Almere) after announcements that the grid congestion affects the development of the city for a longer period.

“We are shocked and full of disbelief. The city is disproportionately affected by this situation. New businesses or companies that move, can already no longer be connected to the electricity grid. And now that residential construction is also affected, Almere has a very big problem. This is an unacceptable situation.”

Our response

It is a difficult situation that congestion arises and businesses and homes have to wait longer for a grid connection. At the moment, this is the inconvenient truth. We are doing everything possible to keep as many parties connected as possible, even with unorthodox measures. This also requires cooperation with local stakeholders, for example so that the infrastructure can be built more quickly and users can avoid the electricity grid at busy times. A national action programme has also been created for this purpose. We will stay in close dialogue with local stakeholders to work on this.

More information in our chapter ‘Deliver a high security of supply’



Mayor of Hanseatic City of Lübeck is concerned about the development of new 380 kV overhead line.



“We support the objective of distributing electricity generated from renewable sources, but when it comes to building the necessary infrastructure, local concerns must not be ignored. We are extremely concerned that the planned 380 kV overhead line will significantly impair these visual axes and thus severely disrupt the visual integrity of the World Heritage Site.”

Our response

When preparing new infrastructure, we deal with many stakeholders in the area where new infrastructure is to be built. This often raises questions about whether the link is necessary and why it should be built here. We understand these questions. We carefully prepare the expansion of infrastructure and analyse all possibilities. TenneT spends a lot of time and attention considering the usefulness and necessity of new connections and also the spatial integration, which we aim to do in dialogue with local stakeholders. In 2023, we held more than 1,500 meetings with stakeholders, including residents, municipalities and provinces.

More information in our chapter ‘Ensure critical infrastructure for society’



Stakeholder in our Reputation Survey.

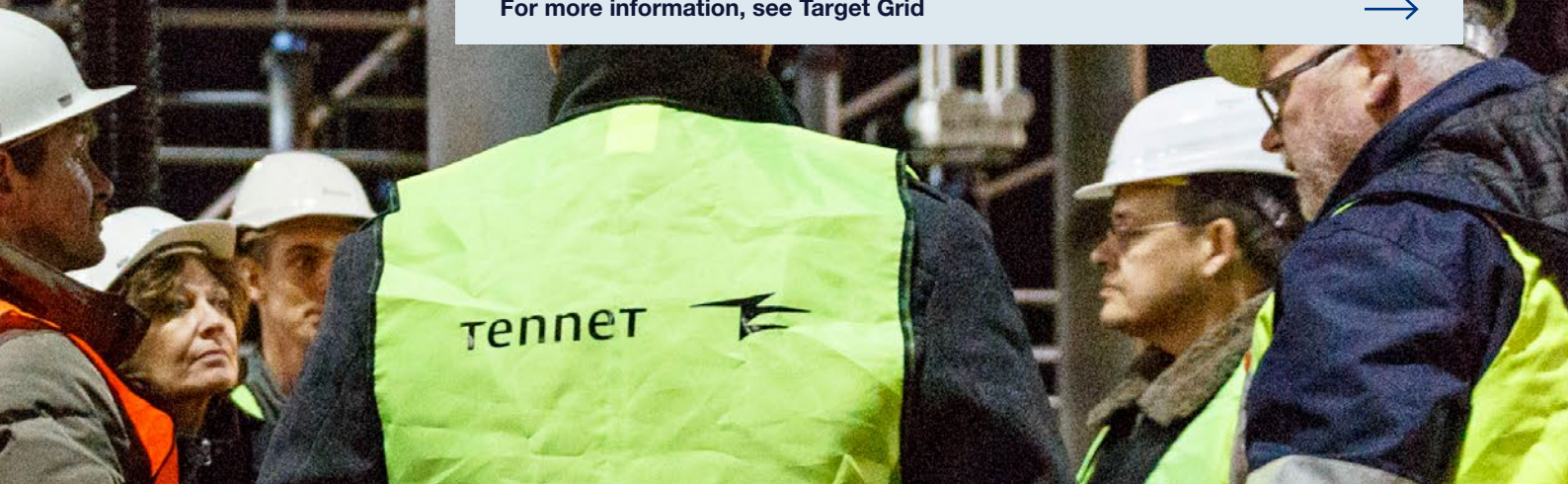


“I find TenneT less transparent when drawing up infrastructural explorations: the fundamental assumptions in the scenarios are made too much in the ivory tower. Stakeholders are not properly involved in the future planning process. Not only TenneT, but this applies to the entire TSO and DSO sector.”

Our response

TenneT likes to look far ahead because our projects have a long lead time. For this, we have several studies we are working on. We also see that the future is not always easy to predict. Stakeholder input is also increasingly important here. That is why we launched Target Grid in 2023, in which (in dialogue with stakeholders) we develop the final picture for our grid to be realised by 2045. And based on this final picture, we are already starting preparations and involving stakeholders closely in this process.

For more information, see Target Grid



Target Grid 2045

The Target Grid 2045 maps out a future, integrated offshore and onshore grid that is capable of meeting society's growing electricity demand, ensuring that the high-voltage grid grows in step with the realisation of a more sustainable electricity system. Target Grid is our strategy to ensure our grid is ready in time to serve a climate-neutral energy system based on electricity from renewable sources for all.

The goals are clear and sharp: the European Union wants to be the first climate-neutral continent in 2050. Germany aims to be ready even earlier, in 2045. By 2030, the EU demands 55% lower CO₂ emissions. This may sound like a long way away, but when it comes to building high-voltage connections, 2050 is like next month, 2040 next week, and 2030 tomorrow.

The essence of Target Grid is to look further ahead and to prepare for this. By using a backcasting approach, we focus on the actions and steps needed to achieve our vision of the future grid. This long-range view offers a number of advantages:

It increases the chance of being able to realise future projects on time, as we can initiate the most time-consuming preparation steps (for instance spatial planning procedures) before the necessity of a project is formally established.



It enables TenneT to build in a more future-proof manner, by aligning with expected national plans for development beyond the vision period of our usual investment planning

It helps us clearly identify the expected impact on the network of certain long-term political choices, allowing us to engage with society about these choices early.

To get a concrete picture of what is required to achieve our Target Grid, we assume the highest degree of electrification in the energy system. After all, it is better to prepare for the highest electricity demand and possibly have to scale down later, than to prepare for too little and have to scale up later (with a higher probability of being too late).

The first version of Target Grid 2045, presented in April 2023, looked at the 220/380 kV alternating current (AC) grid and the direct current (DC) connections needed to unlock wind farms in the North Sea. Based on the insights from this first version, a vision map was developed of what the Dutch and German electricity grids might look like in 2045, the 'Target Grid Map'. This served as a starting point for a public discussion on the envisioned AC and DC grid expansions and the underlying choices.

The Target Grid Map includes the existing grid, plus the projects we include in our Dutch Investment Plan (IP) and projects that are part of the German Netzentwicklungsplan (NEP). Specifically, it emerged that early consideration should be given to large-scale electricity corridors both on land and at sea and connected via hubs to each other and neighbouring countries.

Currently, TenneT is further developing the Target Grid 2045 strategy to ensure the potential benefits of this forward-looking mode of operation can be realised in practice. Target Grid is a dynamic strategy, which is described in a living document. A more detailed elaboration of the future picture - incorporating more technical, operational and market-design aspects and also adding the 110/150 kV grid sections - will be included in updated versions of Target Grid.

Up-to-date information on Target Grid can be found on: www.tennet.eu/target-grid

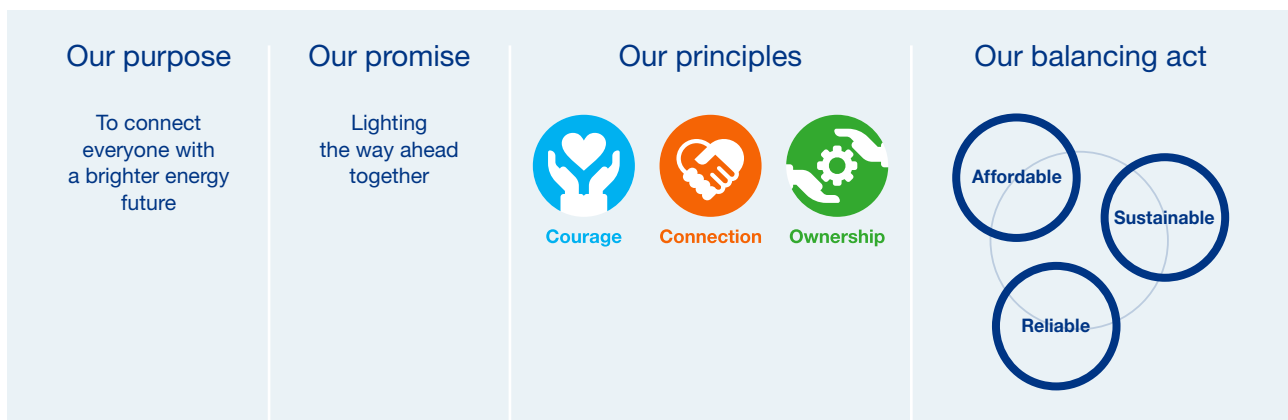
How we bring our strategy to life

In translating our strategy to policies and the decisions and actions that help us achieve our ambitions, we have careful considerations. We consider what we call the three elements of 'the balancing act'. With this, we evaluate the effect of our decisions on reliability, sustainability and affordability. An example of the balancing act is when we are planning and designing new projects to expand or reinforce the electricity grid to ensure a secure supply of electricity, now and in the future.

We make use of raw materials, such as copper and mineral oil, as these are critical to the functioning of our assets and as such, the reliability of our grid.

As these are also naturally scarce resources that come with a negative environmental impact, we aim to increase our circular use of these products. We aim to make more sustainable choices by looking for alternatives, such as aluminium instead of copper. The qualities of resources differ, which can affect their performance in our network. This can make the choice to switch materials more challenging. And at the same time, we also take into account the costs associated with these choices, as a choice that benefits reliability or sustainability might also come with a cost. We strive to find the right balance between all three elements.

Our purpose, promise and principles



The way all our employees are expected to act in achieving our strategic goals is described in our TenneT principles, which provides guidance to how we aim to create societal value.

- **Ownership.** We are accountable for our words, actions and decisions.
- **Connection.** The energy transition is a challenge that requires new ideas, new technologies and new behaviours that build on the strong foundations we have laid. It also requires co-operation on all different levels as we do not have all the answers ourselves. This is why we work actively with other parties.
- **Courage.** We are honest, open and clear about what we think. We dare to make bold decisions, take ambitious initiatives and are willing to learn from our mistakes.

Stakeholders



Employees



NGOs



Governments and policy-makers



Customers



Suppliers



Regulators



Shareholders and capital providers



Energy market participants

Our inputs



Extensive knowledge of and experience with operating the system and integrating energy markets



Cables, lines, stations, offices and interconnectors



Our skilled and motivated employees



Energy, natural environment and materials to build, maintain and operate our grid



Regulatory revenue, (Green) Financing



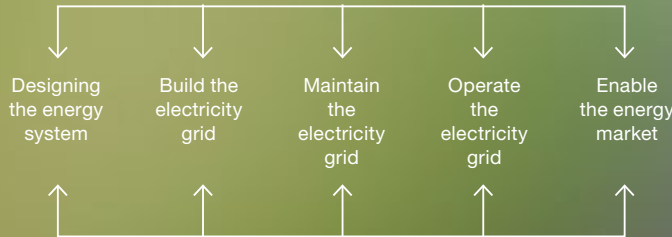
Strategic partnerships and our engagement with (project) stakeholders

How we create value

Our strategy



How we operate Enable the core activities



Our balancing act



Our purpose

To connect everyone with a brighter energy future

Our outputs



Deliver a high security of supply, see page 30



Ensure critical infrastructure for society, see page 38



Create a safe and inspiring workplace, see page 49



Create value to transition to a climate neutral economy, see page 56



Safeguard sustainable financial performance, see page 67



Solve societal challenges with stakeholders and through partnerships

Outcome & Impact

7 AFFORDABLE AND CLEAN ENERGY

- Our societal financial impact on an average household in our service area.
- Equivalent number of households that in theory would have been able to receive 100% green electricity

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

- Societal impact due to availability of our grid

13 CLIMATE ACTION

- Avoided CO₂ emissions



How we create value

TenneT plays an important role within the electricity supply chain and supports and enables the livelihoods of people in the areas we serve. The way we create value is represented visually on the previous page, using the concept of value creation as described by the International Integrated Reporting Council (IIRC), which together with the Sustainability Accounting Standards Board (SASB) formed the Value Reporting Foundation.

By means of the six capitals defined by this framework (financial, manufactured, intellectual, human, social & relationship and natural) we describe our input, output, outcome and impact. This model is the basis of our Integrated Annual Report. As a company that is deeply rooted in society, the engagement and interdependencies with our stakeholders are at the basis of how we are able to create value. In addition, our inputs, through which we create impact for society, are influenced by the way we add value through our strategy and organisation, driven by our purpose and our principles. All of these have been described earlier in this chapter. Moreover, while conducting our core activities as a TSO, our decisions are always influenced by the balancing act of reliability, affordability and sustainability.

More information on the specific inputs, our related outputs, outcomes and impacts are disclosed in 'Our performance in 2023', in each of the respective chapters. The way we aim to create long-term value is defined alongside the six outputs from our value creation model, which is described in the visual on the previous page.

Deliver a high security of supply

Our core task is to secure the supply of electricity, today and tomorrow. And with this, we support the daily lives and activities of people and businesses in the areas we serve. In today's fast changing and more volatile energy system, securing supply is increasingly challenging. TenneT aims to create value for society through its decades of experience in operating our grid, together with a vision of how the future grid and electricity markets should be designed. This expertise and knowledge are our intellectual capital.

Ensure critical infrastructure for society

Electricity plays a vital role in the lives of our stakeholders and society as a whole. TenneT designs, builds and maintains the high-voltage onshore and offshore grid that is needed to secure supply of electricity. Our produced capital relates to the components of our grid, such as our cables, substations, pylons and interconnectors. We realise the critical infrastructure that supports today's electricity needs as well as enabling the energy system of the future.

Create a safe and inspiring workplace

We consider our people to be our most important asset, as they enable us to deliver on our strategic ambitions and create value for society. To this end, we aim to offer a safe, sustainable and inclusive place to work for all our employees. Our programmes and actions focus on creating an inclusive and energising environment where people can thrive.

Create value to transition to a climate-neutral economy

As a company at the centre of the energy sector, we want to drive the energy transition and contribute to achieving the climate targets of the Netherlands, Germany and the European Union. We do this by contributing to a sustainable energy system, where we are able to connect everyone in our service area to green electricity. Simultaneously, we strive to reduce the environmental impact of our operations. This is related to our carbon emissions, our impact on the natural environment and the materials we need to build, operate and maintain our grid.

Safeguard sustainable financial performance

In order to create long-term value, we are focused on maintaining our financial health. Our main sources of financing are our regulatory revenue and externally raised capital. To safeguard our financial health, we aim to optimise our financing costs and deliver a return on capital that meets the expectations of our capital providers. In addition it is essential to maintain strong credit and environmental, social and governance (ESG) ratings.

Connectivity table

Capital	Strategic pillar	Chapter	Topics in materiality matrix	Key KPI's	Performance		Targets	SDG
					2023	2022		
	Overarching 	Page 2	<ul style="list-style-type: none"> Stakeholder engagement Compliance 	<ul style="list-style-type: none"> Internal engagement index Reputation survey 	80* 7.8**	80* 7.8	- -	
 	 Energise our people and organisation	Page 47	<ul style="list-style-type: none"> Creating a sustainable workplace Safety 	<ul style="list-style-type: none"> Absentee rate % female inflow % non-Dutch / non-German inflow Total Recordable Incident Rate 	NL 3.9 DE 3.4 32% 11% 4.5	NL 3.7 DE 4.1 33% 9% 4.9	- 30% 10% 4.3	
 	 Secure supply today and tomorrow	Page 28 Page 24	<ul style="list-style-type: none"> Secure supply today and tomorrow Responsible supply chain practices (Cyber) security Connectivity of our grid 	<ul style="list-style-type: none"> Grid availability Investments 	99.99993% 7.7 bln	99.99963% 4.5 bln	99.99962% 6.3 bln	
 	 Drive the energy transition	Page 36 Page 54 Page 72	<ul style="list-style-type: none"> TenneT's own environmental impact Stakeholder engagement Strategic partnerships Driving the energy transition 	<ul style="list-style-type: none"> CO₂ footprint greened Offshore grid connection capacity 	33% 12.2 GW	35% 9.9 GW	- 11.5 GW by 2023 43.1 GW by ~2030	
	 Safeguard our financial health	Page 65	<ul style="list-style-type: none"> Financial health 	<ul style="list-style-type: none"> Adjusted underlying EBIT*** ROIC *** Adjusted FFO/Net debt *** 	1,709 mio 5.8% 11.6%	1,162 mio 4.9% 11.1%	1,386 mio 4.2% 8.5%	

* The latest employee survey was performed in 2021. In 2023, we decided to update the way we monitor this and will report accordingly in our next annual report.

** Our reputation survey is executed every 2 years. The most recent survey was performed in 2022.

*** Reference is made to the chapter 'Safeguard sustainable financial performance'.

Solve societal challenges with stakeholders and through partnerships

We are convinced that collaboration with stakeholders and strong partnerships with suppliers, customers and other parties are essential to building the future energy system and securing supply today and tomorrow. By combining experience and knowledge from different organisations inside and outside the energy sector, we achieve our strategic objectives.

More information regarding our societal impacts can be found in the section 'Sustainable Development Goals and TenneT' and in the chapters 'Deliver a high security of supply', 'Create value to transition to a climate-neutral economy' and 'Safeguard sustainable financial performance'.

How we create and measure societal impact

The combination of the results of our activities based on (amongst others) our strategy, how we operate and our principles (our outputs) also enables us to create short, medium and long-term societal effects (our outcomes and impacts). Our aim is to reduce our negative and increase our positive outputs, outcomes and impact, such as reducing our own carbon footprint and helping to increase avoided emissions by connecting more and more renewable energy sources to our grid. With the role and scale we have as a company, we are aware that we are able to create

these societal impacts, both negative and positive. We believe that these impacts are not the result of one output or capital and therefore choose to connect them to all and to the sustainable development goals we contribute the most to. We feel that these are our most material societal impacts to report on.

Disclosing an organisation's impacts is a relatively new area of reporting. Measuring these impacts is therefore a journey, and we continue to refine our methodology. Insights gained with respect to these impacts help us see the extent to which we are meeting our strategic goals and the extent to which we are able to fulfil our purpose to connect everyone with a brighter energy future. Reporting on the equivalent number of households that in theory can receive 100% green electricity as a consequence of our work provides us with this information.

Our aim is to disclose the outcomes and impacts which we create on a societal level as a European TSO. This provides insights from a broader perspective on how the people living in the areas we serve experience the positive or negative impact we create and have on them. By focusing on these impacts, we believe that we provide more meaningful insights for stakeholders. All of our impact indicators are also included in [The Sustainable Development Goals](#) section in this report.

The supply chain of TenneT

Our core task is to provide a secure supply of electricity to the more than 43 million end-users in our service area. This task should not be viewed in isolation, as it is part of a wider logistics system with other stakeholders that contribute to the electricity system. Our supply chain entails all parties that are, either upstream or downstream, involved in the supply, manufacturing, construction or deconstruction of materials and products used for our grid. It also includes parties that are, either on the demand or the supply side, involved with the production, exchange or consumption of electricity. In the visual below, our main supply chain partners are represented.

With our work, we have an inevitable impact on the natural environment and stakeholders in our supply chain. For example, the safety of our contractors and subcontractors is affected by the way we manage safety and depends on the quality of our safety procedures. And with the construction of new assets, nitrogen is emitted which impacts nature and local communities. As a result, TenneT, its suppliers and its contractors are impacted by the nitrogen impasse that occurred in the past year in the Netherlands. Due to project delays, end-users cannot always be connected to the grid in the time they prefer. These impacts on the supply chain are part of our responsibility too.

As an example, a part of our supply chain includes the contractors working on grid construction or maintenance projects in the Netherlands and Germany. Another significant group are the suppliers involved with manufacturing important components for our grid, such as transformers. These suppliers are often located outside the Netherlands and Germany, such as Spain, Turkey, Singapore or India. These companies also subcontract local partners, who in turn may hire other contractors or suppliers. This is what we refer to as tier-2 or tier-3 contractors and suppliers.

Considering the speed and magnitude of the energy transition, and the challenges in achieving a future-proof electricity grid in time, it is essential that we work closely together with our supply chain partners. Moreover, due to the shortage of resources (such as technical talent, raw materials and components) it is important that we build long-lasting relationships with suppliers. This helps us to secure our supply chain needs, now and in the future, to achieve our strategic goals. It also provides our suppliers with the security to plan ahead and efficiently prepare for the future, for example by recruiting enough new talents in time.

We believe that solid and sustainable relationships with our supply chain partners, built on trust and co-operation, are essential to achieve the energy transition. This is why we have been working for several years with the integrated Supply Chain Management (iSCM) programme. This aims to reduce the supply chain risks, such as potential shortages in availability of resources and price volatility. By building long-term partnerships with our main suppliers, we can work together and plan ahead, learn from each other and improve processes.

It is also important to work together with our partners to ensure and contribute to responsible supply chain practices. We do not want any of our suppliers to be involved, directly or indirectly, in conduct that does not meet our policies and quality standards. This can relate to product specifications and sustainability-related topics, such as environmental performance or human rights. As part of our due diligence process, we visit suppliers to challenge them on these topics and discuss potential improvements in the ways they manage them. It is our policy not to accept suppliers who fail to meet our standards.

In 2023, we performed 34 supplier visits. 28 suppliers met our standards, or were given the opportunity to take corrective actions to meet our standards. 4 suppliers were not approved and 2 suppliers are still awaiting the results of our visit.

2GW Program: balancing between sustainability, reliability and affordability

An example of how we cooperate with our supply chain partners is the 2GW Program, in which we work together closely with a selected group of suppliers and contractors on a number of different projects. For TenneT, working on the energy transition means finding a balance between sustainability, reliability and affordability.

The transition to a climate-neutral energy system requires substantial adjustments and expansion of the grid. With innovative solutions, TenneT is looking for the most optimal way to tackle this. With the 2GW Program we are opening up the North Sea as an energy source by means of an offshore electricity grid. Our new approach will allow more electricity to be transported to land simultaneously. This can be done by designing smarter and using fewer cables and platforms than before. This will save us time, raw materials and money. The 2GW Program forms the basis for next-generation offshore grid connection systems. For more information, please go to '[Ensure a critical infrastructure for society](#)'.



Human rights at TenneT

Responsible supply chain practices include all social and environmental impacts throughout our supply chain. Human rights are a part of this, and a key focus area of TenneT's CSR strategy. Considering that our construction sites and supply chain are globalised, we consider this an essential part of our sustainability strategy. In 2023, we further developed this as part of the social pillar of our sustainability strategy.

"Our human rights commitment: Respect and promote human rights by delivering on our strategic roadmap for our own operations and that of our extended supply chain whilst collaborating across sectors to drive positive change."

After publishing a Human Rights Commitment in 2022, subscribing to international guidelines such as the 'OECD Guidelines for Multinational Enterprises' and the 'UN Guiding Principles on Business and Human Rights', we followed through with more actions in 2023. We completed a country level risk assessment of our supply chain identifying the impact our supply chain has on the rights of people. To confirm the risks, we engaged with stakeholders (including our value chain workers) through engagement lunches and audits in selected high-risk locations. The findings were integrated into our human rights roadmap and strategy. With this roadmap, we elucidate the steps TenneT will take to execute a robust due diligence process. As due diligence is an ongoing process, we strive to update our commitment and roadmap based on the experience and learnings.

The most salient human rights, i.e. the set of rights that we impact the most, relate to human rights in the supply chain, with our contractors and suppliers. Labour rights, including forced labour, decent wages, collective bargaining, occupational health and safety, working hours and social rights are among the most salient rights for TenneT.

To mitigate our negative impact on these rights, we have included a set of requirements to our suppliers and contractors which includes setting up a robust due diligence process, tracking and monitoring and stakeholder engagement. Our 2GW Program is an example of where we implemented these requirements with respect to human rights. To achieve progress, working together with others is an important way of addressing potential human rights concerns in partnerships or coalitions. Another way of how we aim to achieve progress is, working together with others is an important way of addressing potential human rights concerns in partnerships or coalitions. It is also our aim to develop these partnerships as a measure to mitigate risks and increase our leverage to push for remedies when an impact occurs.

As part of our due diligence, we have integrated the topic of human rights in our [Supplier Code of Conduct](#) and made it part of our supplier visits (see section 'TenneT & its supply chain'). Our grievance mechanism, referred to as the Speak Up Portal, is publicly available in three languages (Dutch, German and English). The grievances are followed up by our Compliance & Integrity department. In line with supply chain legislation (Lieferkettenschutzgesetz or 'LkSG') in Germany, we have an appointed Human Rights Officer who monitors our impact on human rights.

In 2023, there were no human rights violations reported.

TenneT in the supply chain

Raw material extraction and production of materials

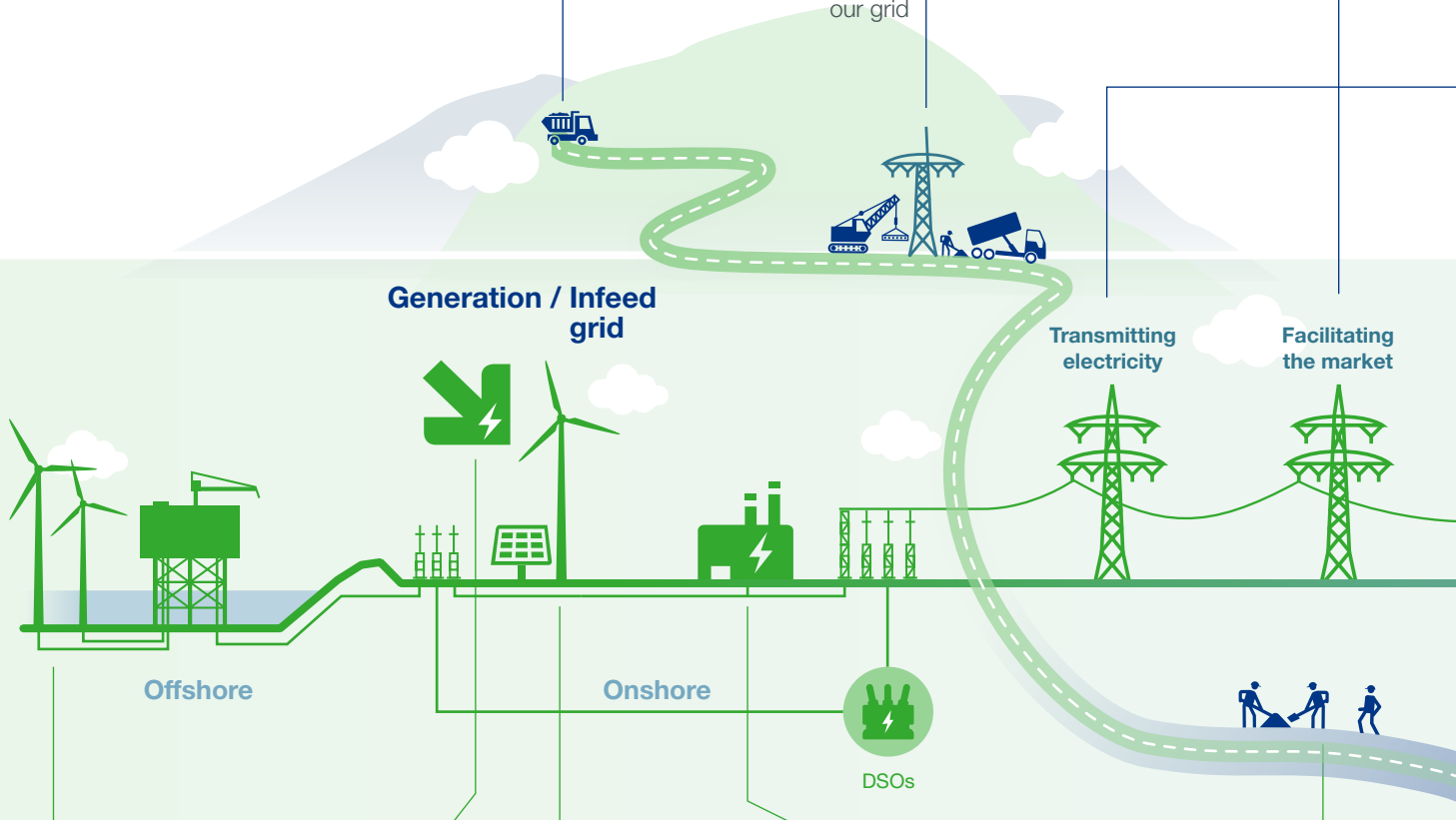
Finding sufficient and the right resources remains a challenge, to deliver a greener energy system and in a way where we reduce our impact on the planet

Construction

Safety is very important when working with heavy machinery and high voltage equipment when building and maintaining our grid

Our core activities

By creating efficient markets that support our task to transmit electricity to our customers, we aim to make our grid future proof



Generation / Infeed grid

Offshore

Onshore

DSOs

Transmitting electricity

Facilitating the market

Renewables

More offshore wind farms are connected to our grid

Renewables

Onshore, we aim to create more capacity to enable more renewables to be connected directly to our grid, DSOs or new technologies that enable flexible solutions

Powerplants

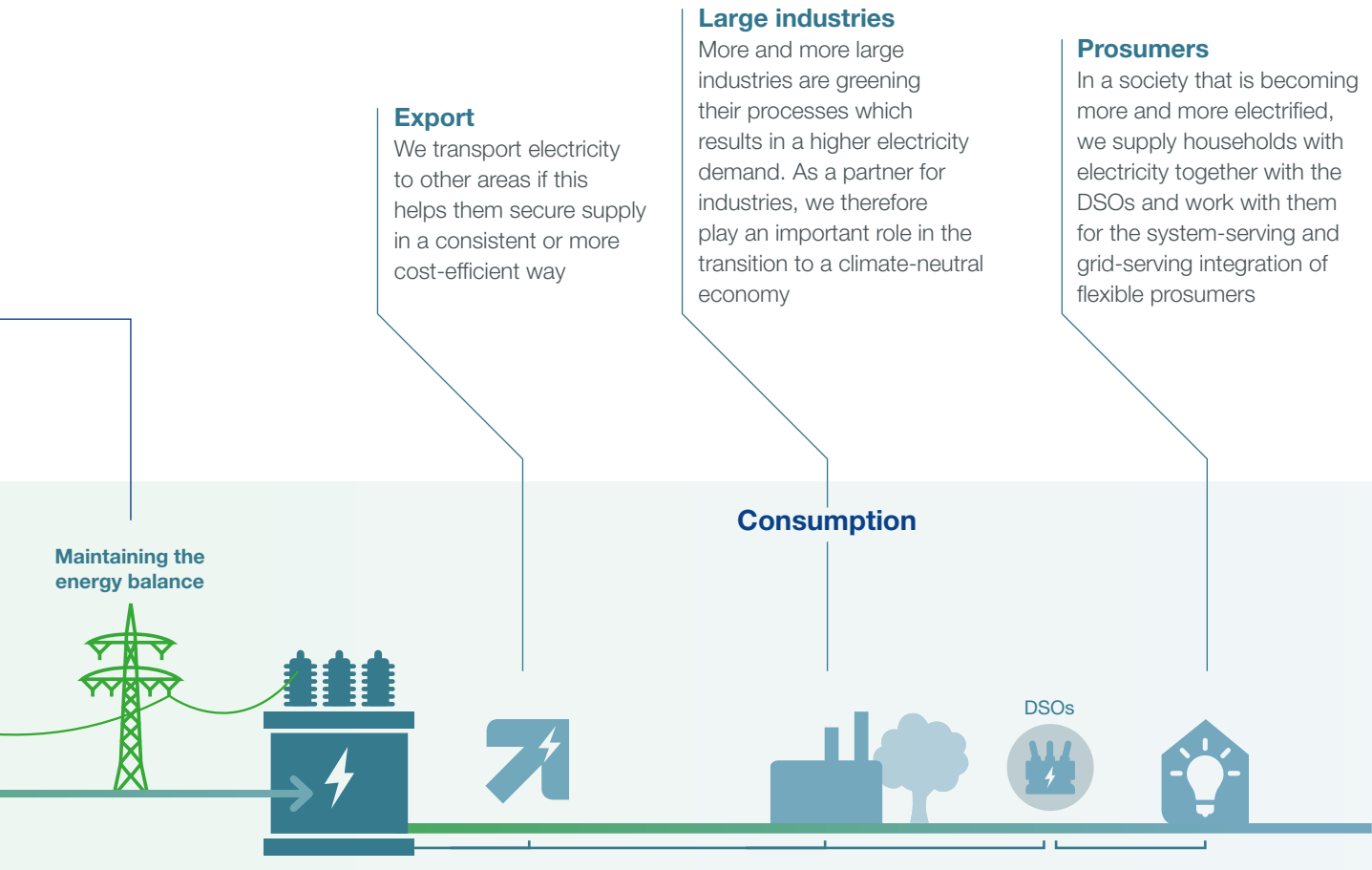
Conventional power plants are still in the mix, but are increasingly being phased out by governments

Import

We import electricity to balance our grid which can also save societal costs

Recruitment and retention of employees

To achieve our strategic objectives we need to hire and retain the right and sufficient employees. At the same time, our supply chain partners also need sufficient personnel to help us deliver on the energy transition.



The Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a set of 17 global objectives established by the United Nations to tackle pressing issues by 2030. They encompass diverse challenges, from poverty eradication and quality education to climate action and gender equality. They serve as a universal roadmap for governments, businesses, and communities to work together, promoting sustainability, equality, and a better future for all. TenneT wholeheartedly supports all global goals, while – considering our main business – we are specifically committed to three main SDGs.





Ensure access to affordable, reliable, sustainable and modern energy for all

- 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

Given our core activities, SDG 7 is where we can have a profound influence. For target 7.1, we have developed an impact indicator that quantifies the financial impact we have on the average electricity bill of households in the Netherlands and Germany. For target 7.2, we track our impact by measuring the gigawatts of renewable energy connected to our grid. Our efforts are evident in the offshore wind capacity connected, aligning with the renewable energy ambitions of the governments in our service areas.

Target	KPI	Contribution	
		2023	2022
7.1	Societal financial impact on households in our serving area	DE: 4.3% NL: 8.7%	DE: 4.8% NL: 9.1%
7.2	Equivalent number of households that in theory would have been able to receive 100% green electricity	14.3 million	14.1 million



Build a resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

SDG 9 (and specifically target 9.1) is another key area where our operations make a substantial contribution. Our impact is measured through an indicator of how the availability of our grid has a quantifiable value for society (through electricity delivered). Additionally, our role in creating interconnections—17 to date—facilitates efficient electricity trade, ultimately lowering costs for end-users. This fosters market development and aligns with the goal of building resilient infrastructure and promoting inclusive and sustainable industrialisation and innovation.

Target	KPI	Contribution	
		2023	2022
9.1	Societal value of the availability of our grid	> GDP of the Netherlands	> GDP of the Netherlands



Climate action

- 13.2.2 Integrate climate change measures into national policies, strategies and planning

Current predictions indicate that governments and organisations need to step up to help mitigate the effects of climate change to meet the 1.5 degrees scenario from the Paris Agreement. As a cross-border TSO and a key player in the energy transition, we can help mitigate the effects of climate change by contributing to a climate neutral future energy system. That is why we have identified SDG 13 'Climate Action' as the main sustainability objective we contribute to. At the same time, our business choices and conduct also impact the planet. This is why we measure our greenhouse gas emissions (GHG) against Science Based Targets Initiative-approved targets. Next to this, we also report the amount of avoided emissions, which due to our activities, we have been able to avoid on an annual basis. This is how we measure our positive and negative contribution regarding SDG target 13.2.2.

Target	KPI	Contribution	
		2023	2022
13.2.2	Total greenhouse gas emissions (gross)	3,293,444 tonnes CO₂	2,547,312 tonnes CO ₂
7.2	Total avoided emissions	18.0 mio tonnes	17.2 mio tonnes



Other SDGs

In the execution of our activities, we also have an impact on other SDGs. We contribute to SDG 5 and SDG 8 when we look at policies relating to our people (including our contractors) and SDG 12, SDG 14 and SDG 15, with respect to the choices we make that affect our planet. SDG 12 for instance, relates to our circularity ambitions, which also has an effect on climate change. Reducing the use of virgin materials, such as copper, will also have a positive climate effect, as it avoids emissions in the extraction phase. That is why we track several KPIs related to the targets supporting these goals, but the effect on these other SDGs is less significant than the ones related to the SDGs above.

Target	KPI	Contribution	
		2023	2022
5.5	% of female board members	45.5%	55.6%
8.8	Total Recordable Injury Rate	4.5	4.9
12.2	% circular inflow * % circular outflow *	36% 75-90%	
14.2/ 15.4	Net zero impact on nature	T.B.D.	

* In 2023, we developed a new methodology for measuring our contribution to circularity.

Our performance 2023



Deliver a high security of supply

Our role as transmission system operator (TSO) is to deliver a high grid availability, while securing electricity transmission to more than 43 million end-users in the Netherlands and a large part of Germany. We are committed to this critical task today and tomorrow, as well as during a period of major change in energy supply mix and high volatility in energy markets.

A secure and stable supply of electricity is an essential component of modern, developed economies. It powers economic growth, fuels industrial activity and technological innovation, supports essential infrastructure and public services, and underpins national security and international competitiveness.

TenneT has a reliable record of providing a stable and secure supply of electricity, with an onshore service level as high as 99.99993%. To keep the lights on at all times, we design, build, maintain and operate our high-voltage grid, transmitting electricity from where it is produced – which includes an increasingly high proportion of renewables – to where it is consumed. Our grid spans over 25,000 kilometres of high-voltage connections, both onshore and offshore, across borders, above (via overhead lines) and below ground (via underground cables).

To secure the supply of electricity, now and in the future, requires fundamental adjustments to the way we design and operate the grid, for example through new developments in electricity storage and demand-side

response. The goal of a sustainable energy future depends on the development of this new energy system. As such, through our critical work and infrastructure, we directly contribute to Europe's ambition to be the world's first climate-neutral continent by 2050.

At the same time as building the energy system of the future, we need to ensure our existing grid can cope with the rapid growth of renewable energy sources and the fast-rising demand for electricity as society progresses in the energy transition. Ongoing grid reinforcement, maintenance, and system operations developments are critical for this, particularly when it comes to relieving the growing congestion we see in our grid.

As such, TenneT faces an ongoing balancing act: securing the supply of electricity today and tomorrow, including relieving the pressure on the existing grid as it comes under more pressure, as well as driving the energy transition and doing so at an acceptable cost for society.

Our performance in 2023

Onshore grid availability

Performance

99.99993%

NL: 99.99993%, DE: 99.99999%

2022: 99.99963%

2021: 99.99999%

Target

99.99962%

Status



Trend

Despite some outages we had, we were proud that our people were able to further improve our onshore grid availability.

Offshore grid availability

Performance

97.90%

NL: 99.01% DE: 97.37%

2022: 94.08%

2021: 94.09%

Target

95.07%

Status



Trend

As we experienced fewer outages this year with our offshore assets, we also saw an improvement of our offshore grid availability this year, in comparison to last year.

Secure supply today

During 2023, our people worked hard to ensure a secure supply of electricity in our service areas, with as a result a high availability of 99.99993% for our onshore grid and 97.91% for our offshore grid. During 2023, TenneT implemented additional measures to prevent power outages, in a commitment agreed with the Dutch Authority for Consumers and Markets (ACM). Structural measures, such as improved security procedures, are designed to prevent future outages as much as possible.

Still, there were a few instances where we unfortunately experienced an outage, for example at our Breukelen substation in Q1 2023. This interruption occurred as a line was damaged and affected around 35,000 customers. Our colleagues worked hard to quickly resolve this matter and this outage was resolved after 12 minutes. Despite these outages, we are proud of the grid availability our people managed to secure.

After the energy crisis in 2022, the markets found more stability in 2023 and the pressure on energy system adequacy eased. Concerns that the war in Ukraine would impact energy system stability in winter 2022/23 were thereby mitigated.

However, although security of supply was less affected by geopolitical tensions and energy market disruption in 2023, after the winter period, grid congestion, particularly in the Netherlands, persisted this year and became more severe.

Tackling congestion in the Netherlands

As Europe strives to achieve its 2030 and 2050 climate targets, the increasing production of electricity from renewable energy sources, as well as the increasing electrification from industry, is so high that grid operators, including TenneT, cannot always provide sufficient capacity at the desired pace. On very windy or sunny days, too much renewable infeed can create congestion as there is insufficient transmission capacity to carry the amount of electricity being generated. In this case, we have to take operational measure to safeguard the grid. New customers will have to be placed in a queue until the grid is reinforced.

Similarly, on the demand side, congestion problems can occur when electricity cannot be transported to the demand location. This is why TSOs and DSOs have to put new customers on a waiting list until the necessary grid enforcements are ready.

In 2022-2023, the exponential growth in new grid connection requests from customers, as well as the growth in capacity of existing connections, was a particular cause of congestion. Customer requests are either for new grid connections – such as wind farms, solar parks, electric vehicle charging stations and battery storage facilities – or from customers that wish to enlarge their connection capacity, such as factories that are electrifying their production processes. Sometimes, customers (for various reasons) submit multiple grid connection applications, while only needing one connection, or request more capacity than they actually need.

Although TenneT anticipated higher electricity demand and has been rapidly expanding and strengthening its grids for over 13 years, grid congestion has still been partly unavoidable. In 2023, TenneT had to announce additional grid congestion areas, in almost all provinces in the Netherlands. We see this issue also becoming more severe for the DSOs, like Stedin, Alliander and Enexis.

To increase the transmission capacity in these areas and relieve and avoid congestion our main task is to expand and reinforce the grid. Over the next ten years, we are investing several billions in our onshore grid every year. But as these works often take several years to complete, we look for more short-term measures too. Congestion management studies, together with regional DSOs, help to identify additional available transmission capacity and measures to be taken to relieve congestion.

TenneT is increasingly working with local stakeholders, including government and municipalities, and DSOs to make targeted choices that relieve congestion where it is most necessary and use the existing grid capacity as efficiently as possible.

An example of this collaborative approach can be seen in a taskforce TenneT joined in 2021 with the Municipality of Amsterdam, Port of Amsterdam, and grid operator Liander. The task force has called for an integrated plan for all Amsterdam energy projects, with multidisciplinary collaboration and standardised processes to allow for faster completion of electricity infrastructure.

In cooperation with existing customers, we are also working on a measure called "rush hour avoidance", whereby customers are compensated for reducing their electricity production or consumption at peak times. A study into how many companies may be interested in this scheme was published in late 2023. The Dutch government may incentivise more customers to provide flexibility in this way, with new legislation being introduced that would require companies with demand exceeding 1MW to explain how they can participate in congestion management.

Another temporary solution to decrease the impact of congestion was adopted by ACM in 2023. This is designed to allow system operators to prioritise projects that solve or limit congestion in the grid, thereby deviating from the first-come-first-served principle. In addition, ACM aims to allow grid operators to give grid connection priority to projects with a social function, such as housing, security services, healthcare or schools.

Securing supply tomorrow

To support Europe's net zero climate targets, we have launched our Target Grid 2045 strategy, with the objective of having a future-proof electricity grid in place by 2045. This will be capable of supporting a sustainable economy, with a reliable and secure supply of green electricity for all users, from consumers to industry.

Flexibility is critical to meeting these challenges, not only related to more effective and efficient use of our assets, but also to boost our system operations and improve market design. There are three focus areas that will be essential for securing supply in the future by facilitating flexibility in demand and supply: grid reinforcement, developing system operations and market integration.

Flexibility

Flexibility is how TSOs refer to using on-demand energy sources to keep the grid secure and in balance at all times. At times of grid congestion, a TSO uses flexible power sources to activate redispatch. When there is not enough generation contributing to dynamic voltage control, flexible power sources are activated to compensate, such as synchronous generators. As such, flexibility installed in the system is essential for keeping the lights on 24 hours a day, 365 days a year.

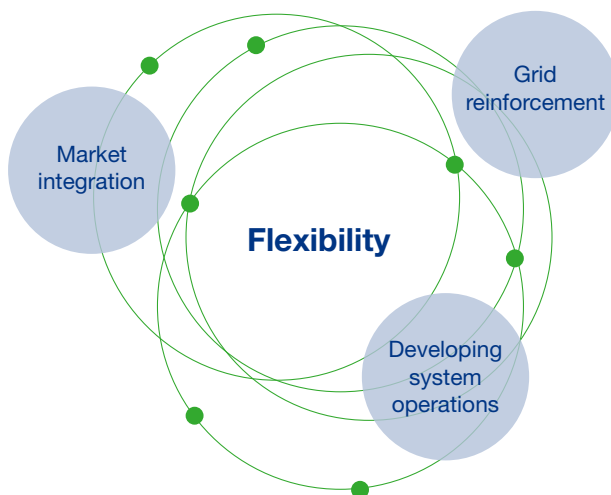
For this reason, TSOs are looking for new, diverse and reliable sources of flexibility. Solutions to store electricity in energy carriers, like battery energy storage systems and hydrogen, are an important area of focus, as are sources of distributed energy storage, such as electric vehicles and home batteries.

The increasing installation of mega-battery systems is a particularly promising source of flexibility, with estimates projecting that 9 GW of battery capacity will be needed (in strategic locations) in the Netherlands by 2030. This is equivalent to nine gas-power plants. In Target Grid we even anticipate 150 GW batteries to be connected to the German part of our grid and approximately 60 GW battery capacity in the Dutch part of our grid to be connected by 2050.

As connection applications for new battery facilities total more capacity than is needed, or are too concentrated in a certain location and thereby add to grid congestion, TenneT is working to advise on where they should be best located. For example near wind- or solar parks as well as where existing high voltage stations are already located. Location is an important factor, as it can increase or relieve pressure on the transmission system, making it critical for both security of supply and affordability. [A map on our website](#)

shows exactly in which province in the Netherlands we expect what battery capacity is needed for system stability by 2030. In this way, we hope that mega-batteries can become an important source of flexible power, planned in a way that reduces congestion and supports the electrical system across the country.

Our three focus areas



Grid reinforcement

The future energy system requires substantially more transmission capacity from the electricity grid, to enable the transmission of higher volumes of renewable power, over longer distances, and to accommodate for the electrification of society. Additionally, the increased system dynamics and need for flexibility in the future energy system require the strengthening and modernisation of the grid. This is the aim of grid reinforcement.

With many of our assets dating back to the previous century, and designed to serve a traditional energy system, substantial work is underway in the Netherlands and Germany to deliver these grid reinforcements (see also the chapter "Ensure a critical infrastructure for society").

A good example can be seen in the North Holland province, where we plan to expand our high-voltage grid, with the construction of a new 380 kV connection. This is urgently needed as North Holland is seeing a tremendous increase in electrification in the past years, and is also strategically important for connections to new wind farms in the North Sea.

In Germany, one of the main aims of the Westküstenleitung project is to strengthen the local grid for increasing amounts of renewables.

Construction and modernisation of substations also play an important role in grid reinforcement. In particular, we need new high-performance transformers to enable the integration of renewable energies via the distribution grid into the transmission grid. We are investing in new operating equipment that helps to stabilise the grid in the context of high renewable in-feed, including plans for new STATic synchronous COMPensators (STATCOMs). These devices help to regulate voltage at the point of connection to the power grid.

Due to the high infeed of renewable energy sources, TenneT is experiencing periods with high voltage levels. To provide reactive power compensation and keep the system voltage within limits, TenneT recently signed a EUR 1.9 billion framework agreement, with Siemens Energy, Hitachi Energy, GE Grid and Royal SMIT to supply 110 compensation coils and 160 power transformers for use in the Netherlands and Germany.

Market integration

Market integration is key to creating a single and interconnected European electricity market. Having realised 17 interconnectors with grids from other TSOs, and also with our offshore portfolio, TenneT is ideally positioned to play a leading role in this development.

The creation of an integrated electricity grid in the North Sea is key to this European market. In 2023, important steps were taken towards this as TenneT joined the German Federal Ministry for Economic Affairs and Climate Action, along with other TSOs to present initial plans about the North Sea electricity grid.

The build-out of offshore hubs, configured with hybrid interconnectors into a meshed DC overlay grid, could eventually form the backbone of a North Sea renewable energy powerhouse for Europe. By connecting offshore wind farms and creating an interlinked offshore and onshore high-voltage grid we aim to ensure reduce greenhouse gas emissions, greater security of supply, increased spatial efficiency, and considerably reduced costs.

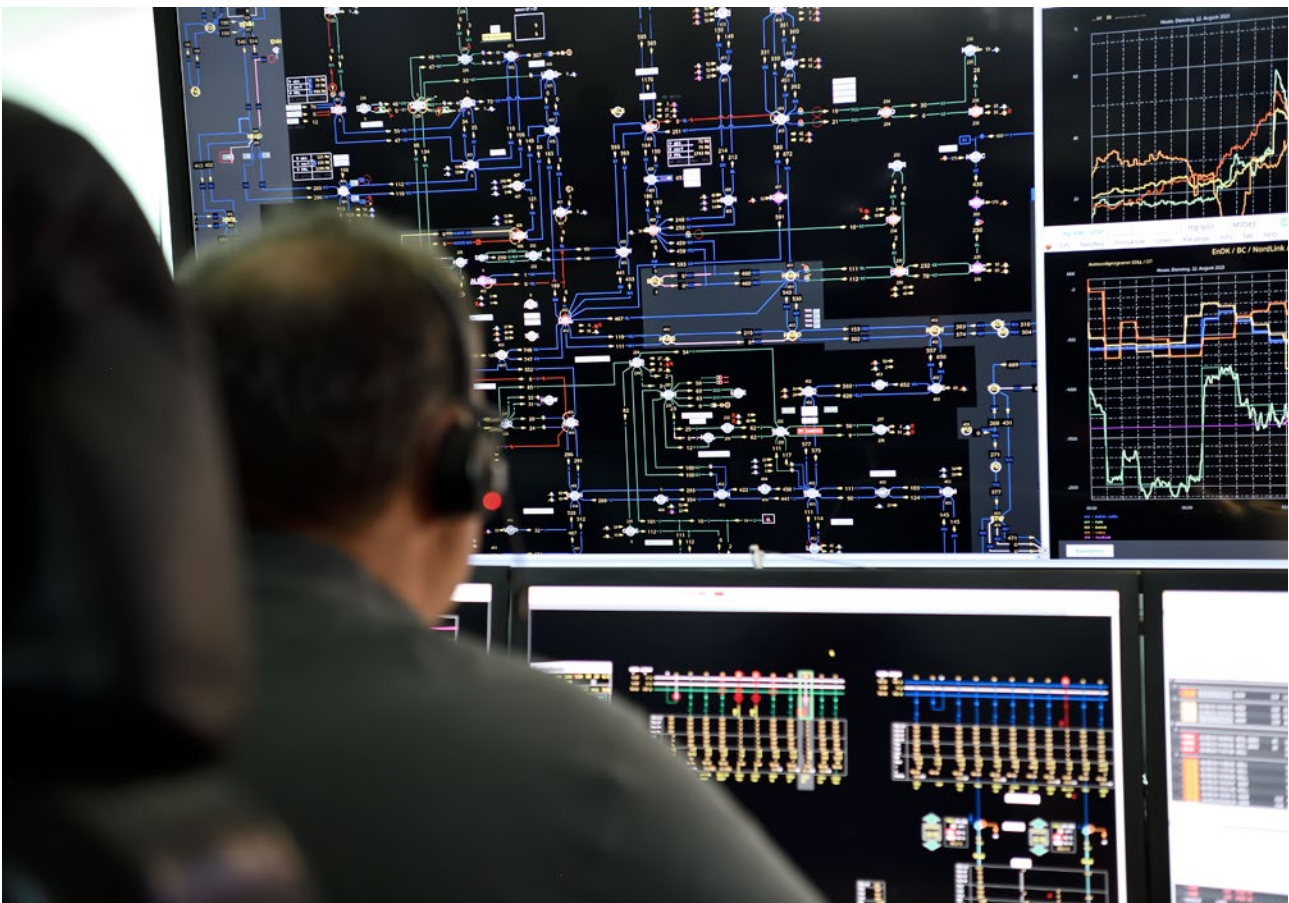
In 2023, TenneT and National Grid Ventures took an important first step towards an integrated North Sea grid with the announcement of a project to develop a multi-purpose interconnector between the UK and the Netherlands. Called LionLink, the project is referred to as a hybrid interconnector because it will connect the two countries via a Dutch offshore wind farm. With a capacity of 2 GW, LionLink will support decarbonisation and energy independence, and strengthen British, Dutch and European security of supply. The hybrid interconnector would be the first of its kind for the UK and the Netherlands. TenneT anticipates that over time more hybrid interconnectors such as this will link more North Sea wind farms and more North Sea countries.

Market design

In March 2023, the European Commission published a legislative proposal to reform the design of the European electricity market. In the targeted regulation, the EU aims at boosting renewable energy investments, improving protection for EU consumers and enhancing the competitiveness of EU industry. As the reform will lead to amendments of the Electricity Regulation, the Electricity Directive, and REMIT regulation, the legislative changes will

impact the whole energy sector, including the activities of TenneT and other TSOs. TenneT is actively contributing to the process through extensive stakeholder dialogue and providing feedback to the German and Dutch ministries of Economic Affairs on a regular basis. Changes will come into force in 2024, with changes expected to include reducing the cross-zonal gate closure time of the intraday market and improvements to the forward market.

In Germany, TenneT is actively contributing to the Climate-Neutral Electricity System Platform. This was designed to bring together stakeholders from politics, science, business and civil society in order to develop concrete proposals for an enhanced market design. TenneT is involved in working groups to build a future-proof vision of market design, focused on the funding of renewable energies in the long-term, the funding of controllable capacities, the expansion of flexibility options and incentives for investment. Incentives for investments in new hydrogen and gas power plants are being further developed in the new power plan strategy (Kraftwerksstrategie) launched by the German Ministry of Economic Affairs and Climate Action.



Developing system operations

As well as grid reinforcement and facilitating the electricity markets, we must also invest in new concepts for operating the grid, to operate a more dynamic system and making more efficient and optimised use of our system through new, including digital, solutions.

An important development to make our system operations resilient for years to come is the Control Room of the Future (CROF) programme. The CROF has the ambition to develop methodologies, processes and tools in order to guarantee excellence at system operations, including improved forecasts, dynamic security assessment, inertia monitoring, and topology optimisation. This essential project also helps us increase grid utilisation and automation, by making TenneT's grid control centres future-proof and equipped to manage our increasingly data-driven grid.

In 2023, an important first step was taken in the CROF project with the go-live of the first part of our new EMS/Scada system which we use to maintain balance in the grid. This replaces the old end-of-life EMS/Scada system.

We are working with other stakeholders in projects under the CROF umbrella. An example of this is an exploration into how artificial intelligence (AI) applications can enable and improve the tools. Another project under CROF is the creation of a "digital twin" of our grid infrastructure, allowing us to replicate the real-world system and its behaviour, including stability analysis of the grid with a high penetration of renewable energy sources.

To this end, our Control Room of the Future project plays a critical role. With this, we are making TenneT's grid control centres future-proof and equipped to manage our increasingly data-driven grid. The project will also help us to increase grid utilisation and automation (for more information see "Solve societal challenges with stakeholders and through partnerships").

Also in 2023, we took important steps in the Allocation 2.0 Programme. This aims to improve our electricity allocation system to facilitate a more future-proof energy market. Together with sector parties we work together to have more accurate, measured and timely data about the energy market.

System resilience

Our transmission grid is a critical infrastructure and the backbone of economic and social activity. As such, it requires maximum protection from risks and threats. This protection is not only essential to guarantee national security, but also to maintain the grid availability levels that our end-users expect from us.

Risks and threats can occur both gradually or suddenly, and derive from internal or external factors. Our ability to react and adapt to them is our organisational resilience. This resilience is not built through a single management system, but arises through the interaction of various management disciplines. TenneT considers information security, business continuity and crisis management as cornerstones that together create resilience.

Information security

European grid operators increasingly face security threats, particularly in the realm of physical threats and cybersecurity. This year, TenneT was involved in a data hack with one of our suppliers. This again stressed the need for constant vigilance and protection of our critical infrastructure (including our IT and OT networks). With an increasingly digitalised transmission grid, the risks of cyber threats grows proportionally. Therefore, digital security and risk management is a key aspect of every new project.

We work together with authorities on security and fulfil all legal requirements. In Germany, TenneT is certified according to the BNetzA IT security catalogue, based on the ISO 27001 security standard. We also apply this standard in the Netherlands to further develop our management system on security.

Business continuity

In addition to security threats we also take other factors into account to ensure system resilience, including risks related to climate-related events and other environmental conditions. TenneT cooperates with relevant stakeholders, including governmental institutions and DSOs, to assess the risks and potential impact of climate-related events on our assets. Such risks are also taken into account when designing new assets. More information about managing climate-related events can be found on page 109.

Crisis management

We also prepare ourselves for situations where existing emergency measures are no longer sufficient. In those situations our crisis management organisation must decide on appropriate measures on an ad-hoc basis. To ensure our capability to manage this, we staff, onboard and extensively train our crisis management organisation throughout the year, and ensure the facilities needed to enable our crisis management personnel. We also exchange our knowledge and contribute to crisis exercises in our sector and on national and international level.

Together, these three elements are the foundations for how we ensure system resilience and the security of our system in general.

What could prevent us from reaching our goals?

Increasing congestion in areas of our high-voltage grid, and therefore limitations for connecting customers, is a growing risk to security of supply – particularly in the Netherlands, but also increasingly in Germany.

TenneT's inability in some areas to connect customers to our grid in a timely manner, as is legally required, could not only result in disappointed customers but also in, for instance, damages and negative publications. One of the mitigation actions we take is to connect customers based on prioritisation instead of a first come first serve basis, as this would lead to a more efficient way of working and could help reduce the lead time with several months.

Another important risk regarding security of supply is asset or system failure, causing power losses. Power loss or interruption could also result from inadequate, delayed or unperformed maintenance of our assets, or an unbalanced prioritisation between new projects and maintenance. In this regard, optimisation of outage planning is key, alongside risk-based maintenance scoping and improved training.

Ancillary services options are another factor that could affect our plans. Our ability to execute ancillary services could be affected by limited availability of interconnected power in Europe or significant increases in traded power prices. Developing international market platforms with other TSOs and market parties will help to overcome this challenge.

As we are responsible for critical infrastructure, we are alert to the risk of cyber threats, resulting in unavailability of critical IT and OT systems, data loss, hardware failure and compliance risks. Equally important is the physical protection of our assets against sabotage, theft or hardware failure. By proactive compliance management, our security monitoring and monitoring of our incident response capabilities, we mitigate these risks where possible.

Major project delays are an ongoing risk. These can be caused by, for example, scope changes, delayed permitting procedures, environmental restrictions (such as with NO_x emissions), scarce resources and issues with recruiting suitable staff. Project delays could lead to penalty payments, higher project costs and reputational damage to TenneT. Increased standardised engineering and sourcing concepts – as is done with the 2GW Program – help to mitigate these risks, as does close collaboration with all project stakeholders and dialogue with regulators, ministries and government agencies as well as with TSOs and other market parties.



Strengthening and expanding the grid is paramount



Cora van Nieuwenhuizen
President Energie Nederland

“That the biggest bottleneck in the energy transition is the overcrowded electricity grid is no longer news. For us, strengthening and expanding the grid is paramount. What can we do to accelerate those plans? More than ever, we need to join hands. Over the past year, we have had frequent discussions about this. That is good. If you know each other and thus each other's interests, you can take the right steps together. We like to think along with you. Also about pragmatic solutions to make better use of the grids. In the end, we all have the same goal in mind: speeding up the transition!”

Ensure critical infrastructure for society

To secure supply now and in the future, we need to design, build, maintain and operate our critical infrastructure on land and at sea. TenneT is one of Europe's largest investors in national and cross-border electricity transmission capacity, providing the grid that serves society's growing need for electricity while also enabling the transition towards a climate-neutral energy system.

Introduction

The assets we build and maintain onshore and offshore form the critical infrastructure needed to power society, enabling economic and industrial growth and keeping essential services running. As we transition from a conventional and fossil fuel-based electricity system to a greener energy landscape, it is essential to invest in our grid to make it future-proof. Unlike the traditional energy system, where conveniently located conventional power plants generate electricity on demand, the energy system of the future will require us to balance numerous sources of renewable energy that have a more volatile and intermittent nature, carried over longer distances, while also delivering the reliable security of supply that society expects.

To meet these challenges and ensure we have a secure supply of electricity now and in the future, we need to strengthen, maintain and extend our energy infrastructure, while also designing a grid that can support society's future energy needs. That is why we develop, on a biennial basis, our investment plans in the Netherlands and Netentwicklungsplan in Germany. In 2023 we published these investment plans. In Germany, we published them together with the other German TSOs and in the Netherlands, we shared our plans for the onshore and offshore grid investments. We notice that in both investment plans, the required investments are steeply increasing, and we concluded that we, next to come up with plans to execute the projects, we needed a different way of thinking. That is why we developed our Target Grid to provide a clear vision and map on how this future CO₂ free energy system should look like and what requirements it needs to meet to enable us and others in the energy landscape to work towards this goal in a (cost-) efficient manner.

In this way, electricity grids play an important role in achieving Europe's ambition to be the world's first climate-neutral continent by 2050. TenneT is using the experience and expertise we have gained in the past decades to build towards this future energy system.

Our Target Grid 2045 strategy, which we presented in 2023, sets out our vision for the electricity grid we will need to have in place in 2045, and the approach for how we will get there. The objective is to have in 2045 an electricity grid that can support a sustainable economy, with a secure supply of green electricity to power consumers and industry. The first version of Target Grid, including the associated grid map for 2045, was presented to the Dutch Minister for Economic Affairs & Climate Policy, Rob Jetten in April.

With Target Grid, TenneT is proposing a DC grid onshore and offshore, served by DC electricity superhighways and energy hubs, alongside a significantly improved existing AC grid. This combination of energy hubs – connected by DC green energy superhighways – will ensure that renewable electricity can be transported over long distances from the North Sea to consumers and industry, and that the electricity grid remains reliable. We believe that our traditional way of acting does not longer hold – it is a way of working that isn't futureproof. Strong partnerships with our important stakeholders are crucial to achieve the 2025 and 2030 targets and ultimately deliver our Target Grid.

As we are delivering more and more projects to drive the energy transition and shift into the next gear with concepts like the 2GW Program to contribute to Target Grid 2045, we are also impacted by challenges we need to overcome today. An example of this is the nitrogen impasse in the Netherlands which effects our projects for instance.

Furthermore, building and maintaining our assets also has adverse impacts. Our work to maintain, expand and strengthen our grid also affects local communities where our assets are planned and built, raising concerns around construction works or electromagnetic fields, for instance. In addition, we face challenges with respect to the supply chain, with careful action required to overcome resource scarcity.

Our performance in 2023

Future proof grid

Investments
in EUR million



As such, we work in a highly challenging environment – on the one hand striving to provide the critical infrastructure in time that will help to achieve Europe’s goal to become the first climate-neutral continent. In a landscape where there is an increasing demand of customers that want to be connected, maintaining an ageing electricity grid that is expected to secure supply and at the same time also is expanded as it needs to be future-proof. Where we also carefully consider affordable costs of our activities.

Furthermore, we are engaging in stakeholder dialogue that addresses potential societal opposition to our work when it impacts nature, local communities, and economic constraints. In addition, we also face challenges with respect in the supply chain, related to resource scarcity. This can become a limiting factor, if we don’t act properly. This is why our decisions are always influenced by the balancing act of reliability, affordability, and sustainability.

Despite the challenges we face in realising our assets, we were determined in 2023 to continue full speed ahead with our investment portfolio. In this context, we made strong progress on our projects, as our investments significantly increased from EUR 4.5 billion in 2022 to nearly EUR 7.7 billion in 2023.

This step-up compared to previous years reflects our determination to press ahead with our critical work to drive the energy transition and ensure the improved availability of electricity for our customers.

We reached major project milestones during the year, both onshore and offshore (see sections to follow) and heavily invested in essential maintenance work. This progress was hard to achieve, given the challenges of the current landscape we operate in.

However, we are encouraged by growing political support for our work, as the urgency of delivering the energy transition in time for Europe’s climate goals has the attention of regulators and policy-makers. An example of this relates to stronger cooperation in the Netherlands with local energy boards and municipalities. In Germany, the introduction of new laws aim to speed up the permitting phase of our projects, which can often account for 70% of the time it takes to realise new infrastructure. Legal changes in Germany regarding permitting and licensing are expected to shorten the delivery of future long-distance DC green energy corridor projects for the energy transition by around two years.

Finalising the applications for all permits for our long-distance DC green energy corridors in Germany – SuedLink and SuedOstLink – in late 2023 was an important milestone in this regard. On both projects we started construction works.

However, with grid congestion and outstanding customer connection requests remaining an issue of great concern in the Netherlands, as well as restrictions imposed on our work due to limits on nitrogen emissions, we are aware that there are many challenges still to overcome. Much more needs to be done to strengthen and expand the grid for the growing electricity demands of society and the increasing share of renewables in the energy mix.

Maintenance

To be able to secure supply today and tomorrow, it is essential we not only expand our grid onshore and offshore, but that we also maintain our existing assets. Ongoing and extensive maintenance with the aim to extend the lifetime of our assets, ensures these deliver a full lifetime of service. Ultimately, the essence of maintenance is to keep equipment in a state where it can continue to perform its intended function.

In the multiple asset complexity of an electricity grid, maintenance also has the critical importance of reducing unplanned outages and thereby contributing to our critical task of security of supply. Furthermore, in a well-maintained grid where equipment is performing its intended function, there is the possibility for redundancy and therefore the opportunity to work on new projects. In this sense, maintenance provides an essential base foundation from which we can perform our daily activities, while also expanding and modernising the grid for tomorrow.

TenneT faces challenges in managing grid capacity in the context of the increasing infeed of renewable energy. An example of this relates to grid expansion and maintenance work without compromising security of supply. TenneT acknowledged this challenge and has done an extensive analysis. This showed that next to needing to optimise the work done in given planned outage timeslots, we also need to consider far-reaching measures (e.g. the earlier piloted 'live working', structural working in shifts, change regulation on allowed risks to be taken, etc.). TenneT has established a cross-unit vision and strategy to address this challenge and to turn it into an opportunity.

An important area of focus has been to accelerate the replacement of end-of-lifetime assets, which is contributing to improved grid availability and fewer unplanned outages. The maintenance team has also increased its output through efficiency-increasing measures, such as combining outage windows, integrating work to maximise use of resources, and using digital tools to improve planning. Another priority has been to focus on further improving efficiency in our maintenance work, maximise the output given limited resources. These efforts are particularly important as the demand and electricity load on our network continues to grow, reducing the possibility for outage windows and so constraining opportunities for maintenance. Addressing constraints on outage windows will be an important focus for the maintenance team as it continues to find ways to increase its output. To this end, we have introduced a new Outage Window Optimisation Project, designed to increase outage capabilities in the network, without sacrificing the pace of our work.

Standardisation of equipment and assets is also helping to accelerate the speed and efficiency of maintenance, making it easier and more efficient to fit and maintain assets that share common design and components. The modules can also be tested and configured in a controlled environment before installation.

We are following this 'plug and play' approach with our Bay Replacement programme, for example, which is currently concluding the proof-of-concept phase before going to full scale roll-out. The modular approach makes it faster and easier to replace substations in busy urban areas, such as in Alphen aan de Rijn, where the old 150 kV station was replaced by a new gas-insulated switchgear station.

Onshore

With the rapid electrification of society, the share of electricity in the energy mix is expected to grow from 20% today to 40-60% in 2050. To meet this increased demand, while also accommodating the growing in-feed of offshore wind power, we need to expand, strengthen and modernise our onshore grid. In fact, expanding and increasing the capacity of the onshore grid is just as important for the decarbonisation of our energy system as offshore grid development, because high-capacity connections are needed to transmit the green electricity onshore to end-users.

Investment in our onshore grid is also particularly urgent in the current context of growing grid congestion, as seen in several regions of the Netherlands (see chapter 'Deliver a high security of supply'). To mitigate this, extensive work is underway to strengthen the capacity of our existing network, with new connections, extensions, and upgrades to our network.

An example of this is our Better Use of Existing 380 kV programme ('Beter Benutten'), in which we are increasing the capacity of parts of the national 380 kV electricity transmission network. Better use means there is no new line, but that the capacity of an existing connection is expanded. This is done by replacing the existing conductors with new conductors. Greater capacity was most needed on the Lelystad-Ens and Diemen-Lelystad connections, making these the first to be adjusted. Other projects related to this programme that are planned to be commissioned over the next few years, consist of the sections between Ens and Zwolle and between Eindhoven and Maasbracht. With this work, we are aiming to build towards our vision of how the future setup of the electricity grid in the Netherlands should look like. We aim to upgrade the 380 kV ring in the Netherlands and create new transmission corridors where needed.

In Germany, we have a different approach, as electricity needs to be transmitted over greater distances. There, we are building an onshore meshed grid, where our DC (direct current) projects such as, SuedLink and SuedOstLink have a key role. The development of these long-distance DC corridors is an important part of our onshore strategy.

They will be a key factor in alleviating pressure on the onshore network, particularly in Germany where they will carry wind energy from the north to end-users in the south. These high-power long-distance DC connections will be an important part of our Target Grid 2045 strategy.

Progress on important onshore projects was made in 2023 in Germany and the Netherlands. The commissioning of a 61 km 380 kV partly underground connection from Ganderkesee to St. Hülfe marked the completion this large onshore project in Germany. Also, the completion in September of the 140 km Westküstenleitung (West Coastline) in Schleswig-Holstein between Brunsbüttel and the border with Denmark sees the addition of another major additional onshore north-south connection.

On the SuedLink project, work commenced in September 2023 with the start of the construction of a 5,200 meter tunnel under the Elbe River. And on the SuedOstLink project, we started construction of the converter in Isar and the first cable sections in 2023.

In the Netherlands, the recent delivery of the Noord-West 380 kV project, replacing a previous 220 kV connection between Eemshaven and Vierverlaten is helping to provide much-needed additional transport capacity in the Netherlands.

As well as performing line upgrades, we are also working to meet the need for more capacity with more substations, focusing on boosting regional hubs where customers are demanding the most connections. This includes the replacement of our Oosterhout substation in the southern part of the Netherlands.

Offshore

The North Sea has a potential for up to 300 GW of installed wind capacity – enough to cover the green energy needs of its bordering countries and to make a significant contribution to Europe's 2050 climate targets. The urgency of energy security has also accelerated Europe's ambitions for the North Sea as a future green energy powerhouse for Europe, bringing countries together to develop shared plans, as seen with the Ostend Declaration of April 2023.

This followed a previous convention in Esbjerg, where the signatory governments of Belgium, Germany, Denmark, and the Netherlands agreed to quadruple their offshore capacity by 2030 to at least 65 GW. The Ostend Declaration further

crystallised this commitment as also the energy ministers of France, Ireland, Luxembourg, Norway, and the United Kingdom set ambitious targets for offshore wind of 120 GW by 2030. TenneT alone is committed to connecting 40 GW of offshore wind in the Netherlands and Germany by 2030.

In November 2023, the governments of North Sea countries and the European Commissioner for Energy, Kadri Simson worked together in the North Sea Energy Cooperation, with the Netherlands as the chair in 2023. More detailed plans were agreed upon to support the aim of realising more than 300 GW of installed wind capacity in the North Sea in 2050. As a result of this meeting, an action agenda was agreed upon and handed over to the new chair for 2024, Denmark.

Our Target Grid 2045 vision is aligned with this massive investment plan for the North Sea. An interconnected DC overlay grid, linking multiple offshore wind farms from different countries, and connecting with onshore DC grids, is envisioned as the backbone of the North Sea powerhouse. The meshing of the DC grid at sea and on land, the interconnection of multiple offshore wind farms from different countries, and the integration of hydrogen electrolysis, will mean lower costs for customers, better utilisation of the electricity supply, and a more robust system.

To realise our Target Grid vision, and in the face of increasing competition for scarce resources, we are working hard to ensure we can deliver on our promise. That is why our 2GW Program has led the way in creating a standardised approach to developing offshore grid connection systems. This will also be crucial to achieving the goal of a North Sea Powerhouse. A milestone in this journey was reached in April 2023, when TenneT and four partners officially signed framework agreements to build fourteen 2 GW HVDC offshore interconnections between 2028 and 2031 in Germany and the Netherlands, with a contract value of more than EUR 30 billion plus EUR 10 billion for the corresponding cables. Eight of the offshore links are in the Netherlands and six in Germany. This is Europe's largest ever tender for energy transition infrastructure.

As the 2GW Program is based on standardised technology that can be shared with other suppliers and offshore TSOs, it sets a blueprint that will stimulate economies of scale and greatly accelerate European progress to achieving offshore energy targets.

2GW Program: balancing between sustainability, reliability and affordability

With the increasing speed and pressure of the energy transition, our traditional ways of thinking and working are not sufficient anymore.

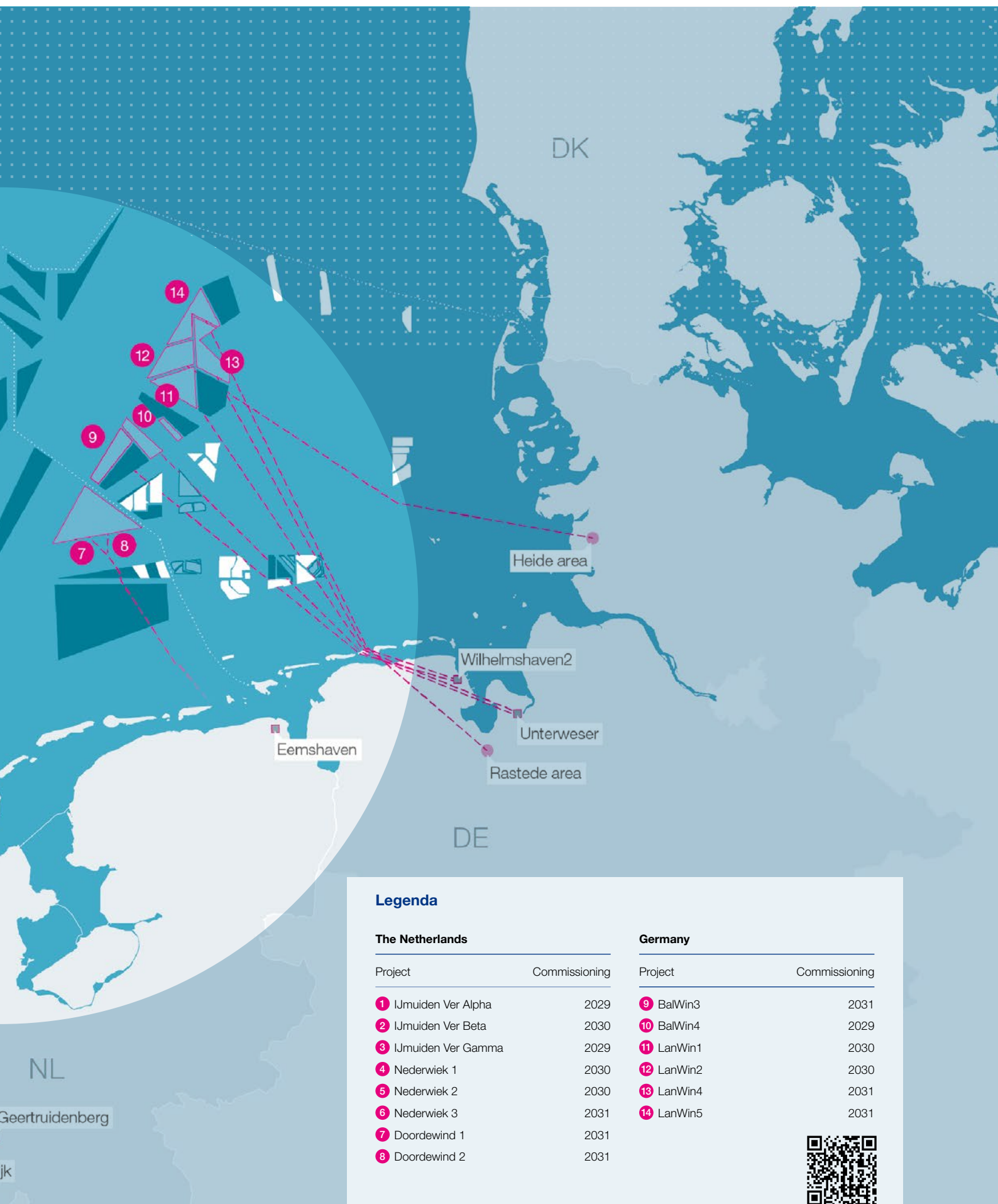
The 2GW Program is a prime example of this and a core element of our strategy to achieve the future energy grid in time. In this innovative project we have, together with our supply chain partners, developed a new 2 GW standard offshore grid connection. By doubling the transmission capacity, compared to the currently existing systems, we will have to build fewer platforms to transmit the same amount of electricity. This approach, will strongly reduce the workload, save time, money, and resources in the process and create solutions together with our suppliers by planning ahead. It is therefore also key in our efforts to maintain affordability of the energy transition and not add to unnecessary societal costs. In line with political climate targets to produce 300 GW offshore wind energy on the North Sea, TenneT will deliver 14 grid connection systems by 2031. The 2GW Program is hub-ready, as part of our Target Grid vision. Furthermore, it has a nature-inclusive design, which implies environmentally friendly measures are integrated in the offshore grid design, as a basic condition.

GB

Maasvlakte

Borsselle

Moerdijk



Legenda

The Netherlands

Project	Commissioning
1 IJmuiden Ver Alpha	2029
2 IJmuiden Ver Beta	2030
3 IJmuiden Ver Gamma	2029
4 Nederwiek 1	2030
5 Nederwiek 2	2030
6 Nederwiek 3	2031
7 Doordewind 1	2031
8 Doordewind 2	2031

Germany

Project	Commissioning
9 BalWin3	2031
10 BalWin4	2029
11 LanWin1	2030
12 LanWin2	2030
13 LanWin4	2031
14 LanWin5	2031



Other new offshore initiatives in 2023, were the announcement of LionLink (see '[Deliver a High Security of Supply](#)') and the Delta Rhine Corridor (DRC). Where regarding LionLink, the opportunity is being investigated for offshore wind electricity from the North Sea transmitted via Nederwiek 3 between the UK shore and the Netherlands and for the DRC the aim is to create the opportunity to transmit electricity from the North Sea directly into the Dutch – German border region. These examples further demonstrate how our Target Grid 2045 is beginning to take shape, as we create and integrate a network of high-capacity offshore and onshore DC connections.

As part of our earlier commitments to realise offshore grid connection systems, we were pleased that we were able to commission three projects this year. In the Netherlands, we completed the Hollandse Kust (noord) project, our fifth and final 700 MW connection from the 2023 Dutch Offshore Wind Energy Roadmap. Furthermore, we were able to commission Hollandse Kust (west Alpha) in December 2023. In Germany, we were able to complete the DoWin6 project, delivering this 900 MW grid connection system.

All three projects were completed on time and within budget, with Hollandse Kust (west Alpha) even three months ahead of planning.

What could prevent us from reaching our goals?

The horizons of our work are long, requiring us to plan our work years – often decades – in advance. In this respect, uncertainties in assumptions, or errors in grid planning, pose risks to our progress as they could lead to an inadequate provision of grid extension projects. TenneT needs accurate assumptions for capacity, spatial planning (e.g. for gas power plants or electrolyzers) or technology and innovation to accurately meet the demands and timescales of the energy transition.

For example, to plan the infrastructure required to realise the DC overlay grid and DC hub concept requires innovations in technology to provide equipment that have not yet been developed. We rely on a small number of specific suppliers to realise critical new technology for these concept-related projects to be executed as planned. In-depth studies and research by TenneT and her partners help us to mitigate against these risks and plan accurately for the future.

TenneT's offshore targets

Installed offshore capacity by TenneT

Gigawatt



* 1GW of older offshore wind farms in the Netherlands use a private connection to the onshore grid.

As we rely on the availability, resources and know-how of key partners to work with us on our critical infrastructure projects, we also face a risk if such partners experience business instability or financial difficulties. Partners who face liquidity issues resulting from unforeseen market disruptions, geopolitical constraints, operational interruptions, could become unavailable for work with TenneT, thereby delaying our critical project work. We also enter into long-term partnerships, with volume commitments, that encourage supplier investment and support business stability. To further protect the continuation of our work, we also ensure a diversification of contractors and perform regular credit checks and use of bank guarantees.

Further market risks can be posed by economic factors beyond our control, such as inflation, price fluctuations and resource scarcity. The strong increase in demand from TenneT and other TSOs contributes to a sellers' market environment, exposing TenneT to risks of abuse of market position, budget over-runs and disproportionate cost increases. Diversification of supply contracts helps protect TenneT against such risks, as well as the use of index-based price adjustment clauses in contracts to reflect market developments.



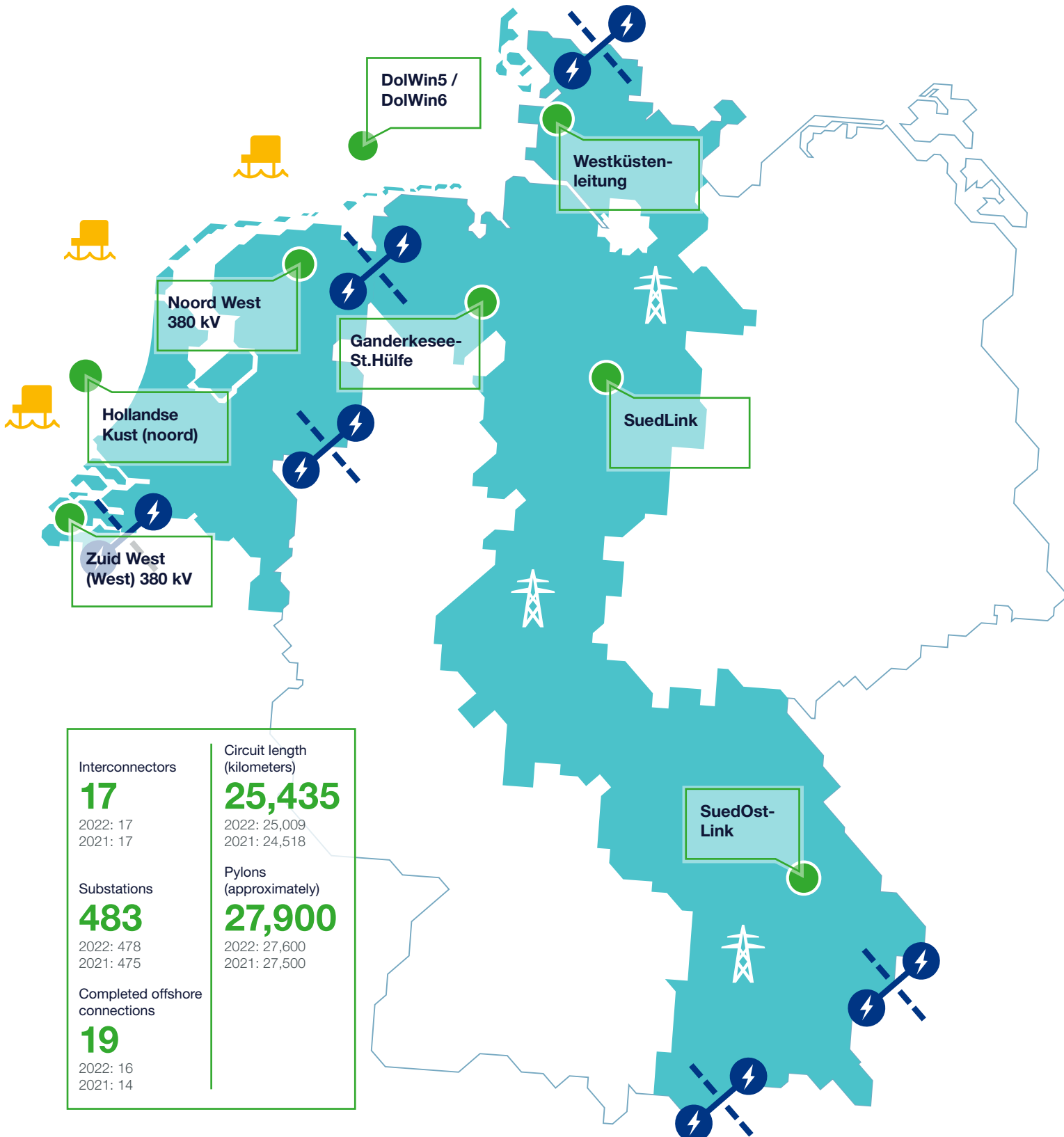
In a tightly regulated sector, TenneT relies on a predictable and stable legal and regulatory environment to plan our critical infrastructure investments and safeguard our financial health. In this regard, unpredictable changes to legislation and regulation pose challenges to our critical infrastructure investments. TenneT closely monitors information on legal changes and keeps the organisation fully informed of anticipated developments on regulatory and legal issues affecting our work.

During 2023, the nitrogen impasse in the Netherlands led to some major delays in projects to expand the electricity grid.

In TenneT's case, more than 13 projects are experiencing immediate delays (half of them by more than six months) and in the absence of a structural solution, almost 100 projects could face delays in the longer term. This could have a negative impact for existing and new end-users, as the investments are also meant to fix and prevent congestion on our Dutch grid. Grid operators in the Netherlands urged the government to develop solutions, like using the new European directive RED III which can speed up the permitting process for energy projects and furthermore to prioritise grid expansion projects in the nitrogen space allocation.

Grid Map 2023

In Germany and the Netherlands, onshore and offshore, we have been working hard to make progress on our projects to secure supply today and tomorrow and drive the energy transition. In our Grid map 2023, we highlight a selection of these projects.

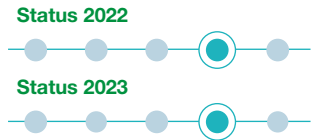


Investment approval process



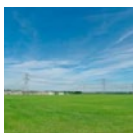
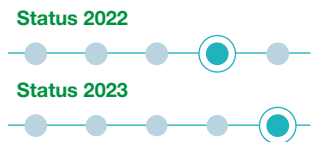
Zuid West (West) 380 kV

In 2023, two of the four circuits (the two existing circuits) of the section between Borssele – Willem Annapolder have been commissioned. For section two (Willem Annapolder – Rilland) a solution for the quality issues related to the foundations has been found and work has commenced regarding the repairs. With this a significant hurdle has been taken to be able to commission this section in the 2nd quarter of 2025 and without any 380 kV planned outages.



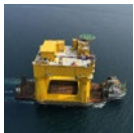
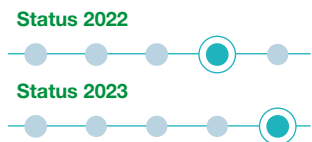
Hollandse Kust (noord)

Hollandse Kust (noord) is a 700 MW alternating current offshore grid connection. The connection connects to the high-voltage substation at Wijk aan Zee and was commissioned in 2023. With this the so-called 'roadmap 2023' was completed.



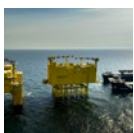
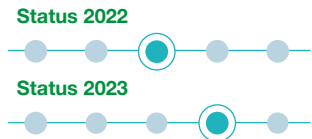
Noord West 380 kV

The project Eemshaven – Vierverlaten 380 has been completed in 2023 in line with planning. Shortly after completion the last works have started to finalize substation Vierverlaten and to decommission the old 220kV track between Robbenplaat and Vierverlaten.



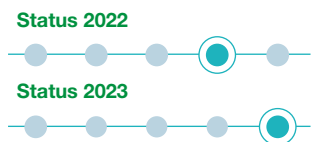
DoIWin5

A major milestone in 2023: After three years of construction, the offshore platform left the shipyard in Singapore in October and reached Haugesund (Norway) end of December. The final technical equipment will now be installed before transport and installation follow in this summer.



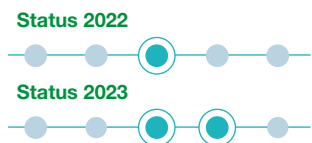
DoIWin6

DoIWin6 was officially handed over to TenneT in mid-September 2023 after several weeks of trial operation by the general contractor Siemens, which was responsible for the construction of the converter stations on land and at sea. The cables were already accepted by Nexans in December 2022, so the full grid connection is in operation.



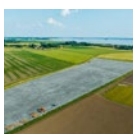
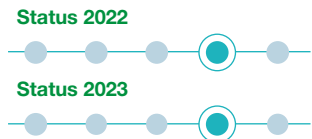
Ganderkesee - St. Hülfe

Ganderkesee - St. Hülfe closes a significant gap in the north-south transport of renewable energy. In August 2023, the transmission line was successfully put into operation. In future, 3.3 gigawatts of green electricity can be transported here, allowing the project to stabilise the regional and national electricity grid and saves significant redispatch costs.



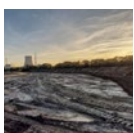
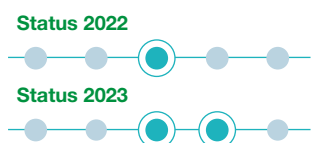
Westküstenleitung

The approximately 140-kilometer-long west coast line from Brunsbüttel to the Danish border went into operation on time in September 2023. The line collects electricity from renewable energies in Schleswig-Holstein in order to transport it towards the south of Germany. From 2025, the border-connection will also ensure improved electricity exchange with Denmark.



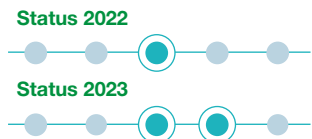
SuedLink

Good progress was made on the project in 2023. The planning approval documents were submitted to the regulator for all planning sections. With the start of construction at the Elbecrossing in the third quarter, the organisation is now heading into the construction phase.



SuedOstLink

After the first section D3b was successfully submitted to the regulator at the end of 2022. The planning approval documents for all sections were submitted by the 4th quarter. Construction also has started in December, and will continue to go "full speed ahead" in 2024.





We need speed when it comes to grid expansion



Christian Meyer
Niedersächsischer Minister für Umwelt,
Energie und Klimaschutz

“Several major successes were achieved in grid expansion in 2023. The important construction of the SuedLink to supply the south of Germany with climate-friendly renewable electricity and thus reduce curtailment costs finally began. Secondly, TenneT reached an exemplary agreement for the transmission and construction of the necessary power lines in dialogue with farmers. This new German speed is needed in expanding our grid. With the new Lower Saxony Climate Protection Act and the Energy Transition Task Force in Lower Saxony, as well as by increasing the number of staff in the approval authorities, we are accelerating the necessary grid expansion, the planned expansion of renewable energies and storage, and streamlining and digitalising procedures. In this way, we will achieve the climate targets together, create security of supply and good grids. Thank you for the excellent cooperation!”

Create a safe and inspiring workplace

As a company that powers society, we rely on our colleagues to help us fulfil this critical task. Our people are our most important asset and we are committed to their safety as well as providing an environment in which they can thrive.

Introduction

At TenneT, we build, maintain and operate critical infrastructure that powers society today, and support our journey towards a renewable energy future. However, these are not TenneT's most important assets – our people are. They are our key strength, and it is their combined effort, teamwork and commitment that helps us achieve these crucial goals for society.

To realise our rapidly expanding portfolio of investments and build an energy system that can support a decarbonised economy, we need to ensure we provide a safe working environment for the people working for and with us. This is a key priority in our work, reflected in 2023 with the introduction of a new centralised Health Safety and Environment (HSE) structure (See 'Safety' below).

With safety as a pre-requisite for everything our people do in their work for TenneT, we work to ensure that we recruit and retain the talent we need to meet our growth objectives. To this end, it is essential that TenneT is an employer of choice in an increasingly competitive labour market, especially for technical talent.

While we have a net growth target of 850 FTEs every year, we need to recruit more people to account for outflow of employees, internal movements and parttime workers. To realise Target Grid, we anticipate that we will need to accommodate up to 10,000 internal and external employees by 2025.

Due to a shortage of technically-skilled talents, other companies in the energy supply chain also need to improve their recruitment efforts. Other TSOs, engineering firms, subcontractors, equipment manufacturers, consultants and a host of other specialists are also seeking to grow their workforce in a tight, candidate-driven market. As many of these employers are also helping to realise the energy transition and directly or indirectly working with TenneT in the supply chain, it is therefore also in our interests for them to attract the people they need.

In this tight market, it is essential that TenneT offers an inspiring place to work, where our people grow professionally and personally, feel safe and supported to be their authentic selves. This is why our strategic pillar 'energise our people and organisation' is so important.

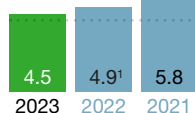
Our performance in 2023

Safe workforce TRIR (including contractors)

Performance

4.5

NL: 2.3
DE: 6.1



Target

4.3



Status

Trend

A positive development is that 2023 was a record-year of investments without fatalities and severe incidents. However, as we did not meet our TRIR target in 2023, we need to continue working hard to perform better and reach our Zero Harm ambition.

Healthy workforce² Absentee rate Netherlands / Germany

Performance

NL 3.9

2022: NL 3.7, DE 4.1

DE 3.4

2021: NL 3.1, DE 2.6

Status



Trend

In the Netherlands, absenteeism increased in comparison to last year. Especially long-term absenteeism was on the rise, which is partly explained by a rise in mental health issues.

Diverse workforce

* % female inflow of
total inflow
** % non-Dutch /
non-German hires

Performance

32%*

NL: 26%
DE: 35%
2022: 33%, 2021: 31%

11%**

NL: 11%
DE: 11%
2022: 9%, 2021: 9%

Target

2023: 30%

2023: 10%

Status



Trend

In relation to a diverse workforce, we saw a steady inflow of non-Dutch / non-German employees, and met our target with regards to female inflow.

¹ In 2023, we concluded that the collected hours were more than our scope is. This has impact on the calculation of the ratio. The impact on the 2023 TRIR is projected on the 2022 TRIR. This resulted in a 2022 TRIR of 4.9 instead of 4.4, while the target was 4.5.

² Please note that we present the absentee rate between both countries separately as they are not fully comparable. For more information refer to our [Reporting Guidance](#) document.

Currently at TenneT, our workforce comprises 6,937 employees, working in the Netherlands (2,805) and Germany (4,132). In addition, we have 1,399 valued colleagues who are externally contracted to us, such as our contractors on site or colleagues working on a project basis. To deliver on the ambitious targets needed to achieve Europe's climate goals, we continued to grow, adding more than 884 additional FTEs to our workforce in 2023, compared to 735 in 2022. This was slightly above our target of 850 additional FTEs for the year.

Our ability to attract new people shows TenneT is maintaining its position as an attractive employer. Despite the tight labour market with many parties competing for the same talents, we still have managed to fill almost all open positions. The effort and improvements were possible due to a new Applicant Tracking Tool and process adjustments and the joint efforts between hiring managers and the Talent Acquisition team.

However, maintaining a net inflow of FTEs became harder in 2023 as more external contract workers left TenneT due to legislative restrictions on interim contracts, particularly in the Netherlands. Current law limits the term of interim contracts. As many of these contracts are coming to an end, we are seeing a larger attrition level than normal. Recruitment is also more challenging as an increasing number of employees make internal moves to new positions, requiring vacant positions to be filled.

As regards safety, we have taken substantial efforts throughout the last two years. We saw a decrease with the Total Recordable Injury Rate (TRIR) to 4.5, compared to a 4.9 rate in 2022, and did not meet our target. Following the fatal incidents that tragically occurred in 2022, we saw none in the course of 2023.

We also track our absentee rate on a quarterly basis, as a measure to track the health of our workforce. In Germany,

we recorded an absentee rate of 3.4 (4.1 in 2022) and in the Netherlands a rate of 3.9 (3.7 in 2022). While we see a decreasing trend in short-term absenteeism with our employees, long-term absenteeism is increasing. This trend, particularly in the Netherlands, was partly explained by a rise in mental health issues among employees during 2023 and we will continue to monitor it closely (more on this in the section [Health & Safety](#)).

To ensure we grow as a diverse and inclusive organisation, we track the diversity of our workforce. With 11% of new employees being both non-Dutch and non-German, we met our targets. We also see developments in other areas of being an inclusive and diverse workforce. This includes, but is not limited to, areas such as gender diversity. In 2023, our female inflow accounted for 32% of new employees, slightly above our target of 30%.

Bring out the best in our people in an inclusive and safe environment

Health & Safety

The nature of our work carries risks, often involving working at height with high-voltage assets and with heavy lifting equipment and materials, onshore and offshore. Despite this, we must deliver a secure and stable renewable energy supply for society in a safe and responsible way. We want all people working for TenneT to come home safe every day and aim for zero harm in the workplace.

As the scale and speed of our work increases, we are exposed to more safety risk. However, our Zero Harm commitment means we need to double down on safety so that our risk doesn't grow in proportion with our output.

In 2023 we introduced a new organisational approach to safety, following a detailed analysis of our occupational health and safety procedures by the consultancy agency DNV. Based on this study, it was decided to build a more centralised, uniform and systematically applied approach to safety across all sites and locations where TenneT's employees and subcontractors work – whether it is offshore in Germany or on a construction site in the Netherlands. The clear aim is to have more structure and company-wide standardisation, ensuring everyone working for TenneT and our subcontractors speak the same safety language, executing their work in line with a set of safety protocols.

As a result, it was decided to centralise all of TenneT's safety management into a new Health Safety and Environment (HSE) organisation, headed by a dedicated HSE director. Around 130 people have been moved into this new unit. Established in July, the HSE unit's first task has

been to create a new Safety Management System. A crucial part of the new system is continuous improvement, meaning that any safety incident is analysed and learned from, with suitable system improvements identified and implemented.

The HSE team is also working to embed the TenneT safety approach with our sub-contractors, not only through regular meetings with leaders from our partners, but also embedding our safety requirements into our contracts, with follow-up meetings to ensure compliance.

In addition, a new system for embedding our Life-Saving Rules (LSRs) has been developed. These rules recognise the reality that a safety incident is often not an independent occurrence, but in most cases an accumulation of small decisions. LSRs are designed to stop those wrong decisions being taken.

At TenneT we also recognise that safety is not always physical – we must also care for the psychological safety of our employees. This is particularly important as in 2023 we saw an increase in long-term absenteeism, with mental health issues rising. Although this is a trend shared by many companies following the pandemic, we aim to fully understand the underlying causes of this trend and to ensure we address them. As such, psychological safety at work is an explicit aspect of our internal safety programmes and training, including the Safety Leadership Programme "Safety needs our energy". We are determined to ensure we provide our people with a safe environment where they feel confident to share their experiences with their team and manager so that suitable measures can be put in place to protect their psychological safety. This is a commitment that extends from our senior leadership team to team managers.

To get a better understanding of the workload and work-related stress of our employees, we also started to research the psychosocial workload (PSA) in 2023, in the Netherlands and in a pilot project in Germany. Results show that many of our colleagues experience a high workload and work-related stress, as well as that mental health problems contributing to nearly 50% of absenteeism. Acknowledging this, we will take measures to address the root causes, including leadership trainings and focussing more on mental health in our vitality programme.

Inclusion, diversity and equity (ID&E)

At TenneT we believe that a wide diversity of people, with different backgrounds, cultures and perspectives are essential for everything we do and thereby for overcoming the challenges of the energy transition. We want everyone

at TenneT to feel welcome and accepted. We strongly feel that inclusion is a prerequisite for diversity to thrive, as diverse candidates will be more encouraged to join and grow in a company with an inclusive environment and culture. In addition to this, equity involves ensuring access to equal opportunities by aiming to eliminate structural and historical boundaries and inequalities which prevent the access to equal opportunities.

ID&E requires long-term efforts as unconscious and conscious biases need attention to take good decisions in recruiting, promoting and developing our employees. This is a constant learning process, where our employees are the most important input givers.

We are seeing the results of our efforts with an increasingly international employee base. In 2023, we have more than 70 different nationalities represented among our diverse employee population and 11% of our new hires were not of either Dutch or German nationality. We have also collaborated with the Refugee Talent Hub for several years, with the aim of hiring diverse technical talents who have come to the Netherlands or Germany as refugees from other countries. As well as temporary 'work experience' places, several of these newcomers have also become permanent employees with TenneT.

Diversity is visible in TenneT from entry level to the most senior members of our team. For example, our trainee groups are a diverse mix of participants from both the Netherlands and Germany, and other countries, with different educational backgrounds. To foster diverse thinking and knowledge, our trainees are encouraged to work cross-border during one of their assignments.

In preparation for upcoming legislation, such as the Corporate Sustainability Reporting Directive and the Dutch Corporate Governance Code, we investigated (via benchmarking with external parties and internal expert interviews) what steps to take for a renewed commitment to Inclusion, Diversity & Equity. An Inclusion, Diversity & Equity policy has been approved by the Executive Board and Supervisory Board in November. This policy aims to outline what ID&E responsibility means for TenneT and what commitments it will make across different ID&E areas.

As part of this policy, we have set several mid- and long-term targets to ensure inclusion, diversity, and equity within TenneT. For example, we aim to achieve 40% female representation for all senior leader positions (all Directors reporting to the Executive Board) by 2025. In 2023, 38%

of these positions were filled by women. Next to this, we want to maintain an equal balance in our Executive and Supervisory Board by 2030, and have set a target of 12% non-Dutch / non-German inflow of new hires by 2026. To deliver on these targets, we will audit some of our internal human resource processes (such as recruitment) to ensure its alignment with this policy. To realise our diversity targets, our aim is to change by design: for leader positions, we aim that the slate of candidates includes at least one female candidate. In case a female candidate turns out not to be the best match, she will be considered for future leader-vacancies. In addition, we will revisit this group of leaders early 2024 to determine how diversity can be improved by design faster when building two national champions. Also for the Supervisory Board, TenneT continuously strives to maintain the desired gender balance in future appointments and in the meantime the company is mindful of other forms of diversity to include. Furthermore, we will crystallise which steps and actions, such as implementation of corporate talent management for key positions, need to be taken in 2024, to meet our ID&E targets. We will also monitor our progress towards these targets closely from next year.

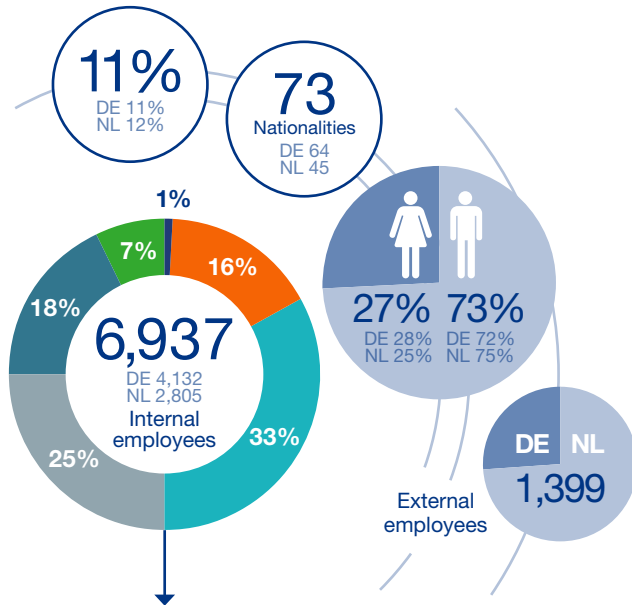
We strive for equal pay for equal work. This is why in 2021, TenneT began its first investigation into a gender salary gap. The first results of this assessment indicate that a gender salary gap might exist in both the Netherlands and in Germany. Data limitations and historical factors create challenges for us to exactly determine all factors that have led to this situation, but we aim to take measures to address, close and prevent gender pay gaps where they occur.

We are pursuing several initiatives to strengthen a women-friendly workplace at all times. We implemented a reporting system to monitor equal application of rewards, benefits and career opportunities. We have invested to secure female safety gear (Personal Safety Equipment) and we have embedded an improved reporting channel for unequal treatment, including sexism and harassment.

Part of our efforts on ID&E relate to promoting gender diversity in the energy sector. Attracting more female talents is a strategic objective and essential if we are to recruit enough people to deliver on our strategic ambitions. In 2023, we held an open day as part of Girls' Day in March, inviting girls between 10 and 15 to come to our Information Centre to learn about the energy transition and how we ensure every home has a secure and stable supply of electricity. Initiatives like this encourage and inspire more girls and young women to study technical sciences and consider a career in our fast-growing sector.

Diversity at TenneT

Non-German / non-Dutch
employees newly hired



Internal employees	NL	DE	Total
● Under 20 years	0%	1%	1%
● 20-30 years	9%	21%	16%
● 30-40 years	25%	39%	33%
● 40-50 years	30%	22%	25%
● 50-60 years	26%	13%	18%
● Over 60 years	10%	4%	7%

Future-proof our organisation by recruiting the best talent

To reach our net growth target of 850 additional FTEs, we need to bring a lot more people into the organisation every year to carry out our investment projects. Recruitment remains a key challenge for TenneT, especially as we are seeking talent alongside other employers in our sector.

As such, we have to be smart in our recruiting, and ensure the strategy covers being an employer of choice, creating an environment where people thrive, grow and stay for a long time.

For example, we are using a new competency-based approach, meaning hiring people for their individual talent, interests and skills rather than solely for their experience. With the start in 2023, we are already starting to see the fruits of this new approach, such as being able to hire good candidates without a specific position currently but who we know will be a good fit for TenneT.

We are also engaging with talent earlier in their career and striving to remain in contact with them through “talent pools” in which we identify future potential recruits. To this end, education, and partnerships with academic institutions (such as the TU Delft, TU Eindhoven, Universities of Erlangen and Bayreuth, or RWTH Aachen), play an important role in our recruitment efforts. Another example of this approach is the Power Minor, a course on high-voltage power which we have been working on with the universities of applied sciences of The Hague, Amsterdam, Arnhem and Nijmegen.

Organise for our people to perform at their best and to work as one company

To meet the challenges ahead, and fulfil our strategic objectives, it is essential that everyone at TenneT feels able to perform at their best. The TenneT work culture and practices need to facilitate this. We invest in programmes and ongoing initiatives to protect our employees’ physical and mental health, which in turn also helps to prevent unforeseen absenteeism and illness.

For our employees to perform at their best and contribute to the TenneT strategy, they need to feel well-informed and engaged. To better understand this, we introduced the first Pulse Check, a quarterly employee survey, in October 2023. First results show that the vast majority of our employees feel highly motivated to support TenneT achieve its strategic goals. However, they also indicate that clear communication and faster internal processes would benefit company success. The results were discussed more in detail between the Executive Board and Senior Leadership Team. We will continue to conduct these employee surveys on a quarterly basis, to be able to compare results over time.

Our long-standing Always Energy programme is an important way in which we help our people perform at their best by focusing on their health and wellbeing. This is an internal vitality programme, featuring workshops, training and events to ensure our people are energised and engaged, with a focus on: physical energy; mental and emotional energy; social energy and purpose/meaning. In 2023, we further raised awareness of Always Energy, and used the findings from employee studies about employees’ physical and mental wellbeing to create a programme that is better tailored to our employees’ needs. We see a strong Always Energy programme as a valuable and positive way to improve employees’ wellbeing and address low engagement due to physical or mental health issues.

Furthermore, as a large employer with a diverse and international workforce, it is essential that we recognise the workplace, and attitudes to working norms, are changing. We are aware of new ways of working and the shifting expectations of jobseekers, to support their wellbeing, psychological safety and motivation. In this respect, 2023 was characterised by a structural shift towards hybrid working. Following the pandemic, when homeworking became the norm, we have adapted to set up a more structural response to changed working patterns. We have accommodated the growing demand for remote working, while also putting in place clear expectations for time spent in the office, for regular face-to-face team collaboration. In this way, a post-pandemic working trend has been managed into a new model of hybrid working across the organisation. This suits the needs of our people while also ensuring everyone at TenneT works together as a productive and energised team. This will stay an area of attention to ensure we follow TenneT's needs and accommodate our employees' wishes

What could prevent us from reaching our goals?

To realise our fast-growing investment portfolio and to achieve the goals of the energy transition, we need a net growth of 850 FTEs every year. However, we face ongoing difficulties to hire the required resources for our planned operations and projects due to very tight labour market conditions. At the same time, we see a higher number of our workforce leaving the company, as well as more of our employees reaching retirement age. The companies we partner with and rely on to realise our projects – such as international engineering and energy contractors – face the same challenges in recruitment and retention. The potential sale of our German activities to the German state, with the possibility of an organisational split, could have an adverse effect on recruitment and retention.

To mitigate these issues, we are prioritising recruitment efforts for the most mission-critical positions and collaborating closely with hiring managers to speed up the recruitment process and attract the right candidates. We are also focusing on improved workforce planning to predict where we need additional personnel most urgently.

The mental wellbeing and psychological safety of our employees is becoming a growing challenge, as our workload and (as a consequence) levels of personal stress, increase. We see growing long-term absenteeism resulting from mental health difficulties. To address these issues, we have undertaken a mental health survey and increased the involvement of company doctors in the treatment and follow-up of mental health problems. Increased training and coaching – such as e-learning on psychological safety – is also being increased as part of our Safety Needs our Energy programme.

As TenneT works in an intrinsically high-risk sector – with many of our people working at height, or on busy construction sites, with heavy and high-voltage equipment offshore and onshore – safety is of primary importance in everything we do. We are acutely aware that safety incidents and major occupational or industrial accidents (such as fire, explosion, helicopter crash, vessel collision, structural failure or release of toxic substances) could result in fatalities, severely impact the environment, damage our critical infrastructure and harm our reputation.

During 2023, TenneT increased its investment in safety, with the introduction of a new centralised HSE organisation. As part of our new HSE approach, including new safety management procedures and Executive Board-approved safety directives, we are stepping up our safety measures across TenneT. Safe work plans, workplace inspections, training and instruction, incident investigation and follow-up, are all part of the new safety culture.

Vacancies at TenneT

We are continuously looking for new colleagues. Check our Dutch and German vacancy websites for all jobs.



Dutch



German



Support security of supply in Ukraine



Andreas Stach
TenneT

“To support security of supply in Ukraine, we are supporting our colleagues TSO Ukrenergo and DSO DTEK with technical equipment. The assistance is provided under the leadership of the Ukraine Support Task Force (USTF), which is part of non-governmental organisation ‘Energy Community’. We are donating technical equipment that has already been used but is still in a very good condition, such as emergency generators, high voltage equipment and a mobile switchgear. With this, we hope to provide humanitarian support.”

Create value to transition to a climate-neutral economy

As a key player in the energy transition, we are working to connect society to green electricity by developing a reliable, affordable and future-proof grid. The main impact we have as a company is driving the energy transition to support Europe's goal to become the first climate-neutral continent by 2050. We aim to do this by leading as a green and responsible grid operator. We strive to reduce the environmental impact of our operations and minimise our carbon emissions, our impact on the natural environment and the materials we need to build, operate and maintain our grid.

Introduction

The world's dependency on natural resources is reaching its limit. The combined threat of climate change, the impact it has on the environment and resource scarcity requires us to transition to alternative ways of doing our business to continue to provide value for society, without damage to our climate or our natural environment.

As a European TSO, TenneT creates value for society by developing the assets, knowledge and innovations to build a reliable and affordable future-proof grid that supports the EU's net zero ambitions. We are pleased that with the realisation of our investments in a future-proof energy system, we are enabling progress in the energy transition and helping mitigate climate change. Around 50% of the electricity consumption in Germany and the Netherlands came from renewable sources in 2023.

However, as we expand and reinforce our grid, we are conscious that we also have a negative impact on the natural environment. Procuring and producing the materials needed to build our assets on land and at sea, operating the assets to ensure a reliable energy system and effectively managing the emissions which result from our own operations all have an impact on the environment amongst other things. And as the energy transition is a global challenge involving a wide array of other parties from the energy sector and associated supply chain, our sector's demand on resources and impact on nature is growing all the time.

At the same time, the expectations from our stakeholders – such as governments in the areas we serve – are increasing, demanding more effort to combat climate change and limit the environmental impacts on the world around us.

As well as contributing to societal objectives by driving the energy transition, TenneT can create additional value by leading as a green and responsible grid operator. We have set firm emission reduction goals for 2030 and are working hard to reduce emissions throughout our supply chain (see 'Climate' section below). We have also introduced a new circularity strategy, improving the sustainable impact we can have with the use of our scarce resources, such as copper (see 'Circularity' section). These and other efforts to protect the environment are becoming more embedded in the design of our assets.

Through our nature, climate and circularity ambitions, we aim to shape what we believe is necessary for a responsible growth path, while supporting Europe's goal to become the first climate-neutral continent in 2050.

Climate

We follow a threefold approach with regard to our impact on climate:

- We aim to reduce our direct and indirect emissions.
- We green the emissions from our own operations as a TSO where reduction measures don't apply.
- As a last resort, we seek compensation for the emissions which we absolutely cannot reduce or green.

In line with the Science Based Targets initiative, which we committed to in 2021, we are determined to contribute to the goals of the Paris Agreement. The targets we set in 2021 include ambitious emission-reduction goals for 2030 (measured against a 2019 baseline) which aim to cut our direct emissions in scope 1 and indirect emissions in scope 2 by 95% and our indirect emissions (scope 3) from purchased goods and services and capital goods in our supply chain by 30%. These targets have been determined in addition to our 2025 climate-reduction targets. The majority of scope 1 and 2 emissions are from grid losses – the electricity lost during transmission across our network – and from emissions from the insulating gas SF₆, energy

Our performance in 2023

Climate

Performance	Target	Status	Trend
CO ₂ footprint of our grid losses, substations, offices and mobility (net emission in tonnes of CO ₂)	Climate neutral in 2025 ¹		A slight decrease of our gross carbon footprint as a result of less SF ₆ leakages and less grid losses compared to 2022. Partnerships are in place to further develop SF ₆ free alternatives. Our Net carbon footprint remains at the same level as prior year, as a result of the inability to fully green German grid losses. This remains the main challenge to meet our 2025 target.

Circularity

Performance	Target	Status	Trend
<ul style="list-style-type: none"> • Potential recovery of assets • Circular inflow • Circular outflow 	Increase the potential recovery of our assets and make our materials inflow and outflow more circular		In 2023, we developed our first Circular Economy strategy, as a more integrated approach was deemed suitable. While we are effectively increasing our efforts to improve our circular performance, data availability remains a major challenge.

Nature

Performance	Target	Status	Trend
<ul style="list-style-type: none"> • (Net) impact on nature • Environmental incidents 	Net zero impact on nature in 2025		We recorded more environmental incidents and just a slightly better performance on oil leakages in 2023. To limit our negative impact, active steps such as installation of bird diverters on our overhead lines and replacement strategy for our most leakage prone cable circuits have been executed. Our positive nature measures are being scaled up.

¹ To be fully climate neutral (SF₆ emissions, grid losses, energy use offices, stations and mobility of our employees) in 2025.

use at our offices and our stations, and the vehicles we own and operate. During 2023 we also made significant progress in our efforts to measure and address our scope 3 emissions, which are the indirect emissions that arise in our supply chain, as a result of what we purchase and contract. This means we are including scope 3 emissions in our reporting for the first time.

The largest impact that TenneT has in terms of climate action is to enable the switch from a fossil fuel-driven economy to a climate-neutral economy by connecting renewable energy sources and transmitting the produced electricity. We define our key impact metric in this area as the equivalent number of households that in theory would have been able to receive 100% green electricity. It is important to realise that the majority of the electricity consumption comes from industry. We estimate that by the end of 2023 we enabled the theoretical equivalent of more than 14.3 million households to receive green electricity

(14.1 in 2022). These climate figures are not just achieved by our own operations, but also by our partners in the value chain, such as electricity generation companies and distribution system operators (DSOs). By working together, we were able to help avoid 18.0 million tonnes of CO₂ in 2023, compared to 17.2 million tonnes in 2022.

Scope 1 (Direct own emissions)

SF₆

TenneT needs to use special insulating and fire-extinguishing protection for our high-voltage stations and distribution systems. Sulphur hexafluoride (SF₆) is widely used by TSOs as a highly effective insulating gas in switching installations. However, it is also a greenhouse gas, with one unit equivalent to over 23,500 units of CO₂. We conduct permanent monitoring of our assets to detect leaks and swiftly report them to the appropriate internal reporting mechanisms. While SF₆ leakages currently only account for around 1% of our carbon footprint, we still aim to mitigate

Carbon footprint information

	2023 (gross)		2023 Total	2023 (net)		2023 Total
	DE	NL		DE	NL	
Scope 1 GHG emissions						
Total Scope 1 GHG emissions (tCO ₂ eq)			22,982			14,130
Sulfurhexafluoride (SF ₆) leakages	1,957	12,737	14,694	1,957	12,737	12,873*
Lease vehicles	3,743	3,152	6,895	3,743	3,152	1,346*
Gas consumption	809	583	1,392	0	0	0
Scope 2 GHG emissions						
Total Scope 2 GHG emissions (tCO ₂ eq) <i>location based</i>			2,569,478			1,501,971
Grid losses	1,749,522	719,030	2,468,552	1,501,971	0	1,501,971
Electricity use stations	86,874	9,101	95,974	0	0	0
Electricity use offices	1,518	3,433	4,951	0	0	0
Total Scope 2 GHG emissions (tCO ₂ eq) <i>market based</i>			3,588,715			2,307,310
Grid losses	2,768,759	719,030	3,487,789	2,307,310	0	2,307,310
Electricity use stations	86,874	9,101	95,974	0	0	0
Electricity use offices	1,518	3,433	4,951	0	0	0
Significant scope 3 GHG emissions						
Total Significant scope 3 GHG emissions			700,984			700,984
Business travelling	2,791	2,650	5,541	2,791	2,650	5,441
Offshore transport			5,543			5,543
Purchased goods and capital goods			690,000			690,000
Total GHG emissions <i>location based</i>			3,293,444			2,224,545
Total GHG emissions <i>market based</i>			4,312,681			3,029,884
Target 2030	Scope 1 and scope 2: 95% reduction, scope 3: 30% reduction compared to base year 2019					
% Greened of our carbon footprint <i>location based</i>	33%					
% Greened of our carbon footprint <i>market based</i>	30%					

* part of our emissions are compensated with CO₂ certificates

its impact as much as possible. We are working to find sustainable alternatives to SF₆ that provide similar safety properties without harmful emissions.

In doing so, we use our internal carbon price of EUR 150 per tonne to evaluate alternatives to SF₆ in our tenders. By 2025, we aim for a third of TenneT's switchgear - those that use a significant amount of the gas - to be SF₆-free, followed by another third in 2030. In this regard, we made good progress in 2023 on this, with 61% of the assets installed this year was SF₆-free regarding our 110/150 kV assets and 23% of the 220/380 kV assets installed in 2023.

Since alternatives to SF₆ are a key bottleneck as mentioned above in line with our long-term strategy, we invest in joint partnerships and market stimulation through innovative partnerships. One such partnership is the research and development of a hybrid GIS SF₆-free solution. In Germany, we have ordered the world's first completely SF₆-free 420 kV gas-insulated metal-clad switchgear (GIS), which is being developed and to be built at the Erzhausen substation (Lower Saxony) by 2024 and is part of the Wahle-Mecklar AC grid expansion project.

Our 380 kV station Maasbracht in the Netherlands is one of TenneT's largest. When the time came for the station to undergo renovation, two suppliers were selected to provide an SF₆-free solution in the gas-insulated lines (GILs). By using a natural alternative to SF₆, the 'global warming potential' (GWP) of the insulation gas in the GILs is significantly lower compared to over 23,500 for SF₆. As TenneT gradually switches to using natural gases for insulation in new electrical switchgear, moving to alternatives for SF₆ has its own challenges since the majority of currently available alternatives still have a significant global warming potential. Though this is lower than that of SF₆, it still contains a fluronitrile compound.

As TenneT, our long-term strategy is to use gases for installations which have insulating properties with a Global Warming Potential (GWP) less than 1, when at least two market parties are able to offer this. New regulations such as those related to the Fluorinated (F-) gas and per- and polyfluoroalkyl substances (PFAS) also influence our decisions in making our long-term strategy a reality. The use of PFAS in solid, liquid, and gaseous components of grid equipment is determined by manufacturers to ensure the

needed requirements for its performance and reliability. TenneT is committed to protecting the public and workforce wherever risks stemming from PFAS are identified. We have emphasised this to the concerned authoritative body.

The pressure to find alternatives to SF₆ is becoming more acute, as our project portfolio increases and we face restricted available outage time and space needed to perform maintenance and replacement work. Our delivery of alternatives must match the speed of the energy transition without losing focus on safety and reliability.

Gas consumption

Gas usage for heating our offices and stations is also part of our scope 1 emissions. To ensure we are meeting our 2025 climate neutral goals regarding our offices and stations, we have greened our gas consumption via guarantees of origin and (or) green gas contracts or compensated them.

Lease vehicles

The mobility of our employees, whether travelling to and from the office or out in the field, is part of our CO₂ emissions and is an area we are addressing with carbon-reducing policies. For example, we aim for a fully electric lease car fleet by 2025, replacing the current use of hybrids. This year, we made progress on this as per December 2023 around 43% of our current fleet was electric compared to approximately 39% at the beginning of the year.

Scope 2 (Indirect emissions from generation of purchased energy)

To align with the criteria set by the Science Based Targets initiative, as of this year we will make use of the so-called 'market-based approach', which means that our emissions are based on the emission factor per contracted source.

Grid losses

As we transport electricity, in growing amounts even, through our network, it's unavoidable that some of it will be lost. Known as grid losses, these are measured as the difference between the electricity fed into the grid and the electricity delivered. Grid losses depend, among other things, on the current, voltage and the distance that electricity is transmitted. We cannot prevent grid losses from occurring; they are an inevitable part of electricity transmission over high distances. Currently, grid losses account for around 75% of TenneT's carbon footprint (scope 1, 2 and 3, based on a location-based approach. When applying a market-based approach, this would be around 80%).

A MWh lost can no longer be used to power an electric vehicle or to keep the lights on. The emissions related to that MWh fall within TenneT's scope of responsibility. The impact of our grid losses on the environment has always been determined by the local electricity grid mix: the average emissions per MWh are considered to be the environmental impact of that grid loss. When all purchased electricity related to these grid losses would have been purchased from climate-neutral electricity sources, that would mitigate our carbon impact from grid losses as well. As we are bound by law to purchase against the lowest possible price at a certain moment in time, this is not possible to mitigate during the year when grid losses occur. That is why purchasing guarantees of origin equal to the amount of electricity lost is our way of greening our grid losses. We are currently limited by German regulation in purchasing guarantees of origin (GoO), which is why we procure GoO's corresponding to a monetary limit of the German grid losses at a group level. For 2023, we will green 100% of grid losses in the Netherlands and 14% of the grid losses in Germany. This relates to the location-based calculation of our scope 2 emissions. When applying the market-based approach, this would be approximately 17%.

Over the past years, TenneT has been actively pushing the debate on greening of grid losses in Germany. This has resulted in more awareness, but so far no policy change yet. That makes that the greening of grid losses on the German side comes fully to the account of TenneT and TenneT has decided (already for many years) to do this in a balanced way – with a budget cap. Since we foresee no policy change in 2025, it is likely we will not meet our own climate-neutral ambition in 2025.

Every year, specific tenders are drafted to procure the certificates corresponding to the estimated volume of our grid losses. The final step for greening of grid losses is the cancellation of the certificates. These certificates are then cancelled in that year to attribute it to the volume of grid losses greened. These cancelled guarantees of origin are then accounted for in our carbon footprint calculations and reported. However, when comparing the cancelled certificates with the actual energy consumption it became clear that lesser certificates were cancelled for the year 2019. The certificates were bought but not cancelled. Our intention in 2019 was to green our grid losses. Unintentionally, we failed to cancel the certificates and in line with our sustainability ambition and to meet our stakeholder expectations, we took a step to correct this despite a significant increase in costs. We will purchase and cancel the certificates in accordance to the corresponding volume of 2019.

Electricity use in stations and offices

Similar to gas usage, the electricity use in our offices and substations has an impact on our carbon footprint which we mitigate by purchasing green electricity. For our substations, we use solar panels, insulation measures and LED lighting where possible. We have installed solar panels on our land stations at Hollandse Kust (noord) and also intend to install them for the land stations used in our 2GW Program. We will use the generated electricity for our own consumption. We have also installed solar panels on some of our substations in Germany.

Scope 3 (Indirect emissions in TenneT's value chain)

Purchased goods and services / capital goods and services

Alongside the emissions that are emitted as a result of our owned and operated controlled resources, we also report the emissions that are emitted in our value chain – scope 3 emissions. As part of the Science Based Targets we formulated, our biggest scope 3 impact is from the purchased and capital goods and services related to our projects. To gain sufficient and accurate insights and take action to reduce these emissions, we need to work together with our supply chain partners. In 2023, we were able to gain preliminary insights into our scope 3 emissions related to purchased goods and capital goods and services. Based on these calculations we estimate that these are around 690 kilotonnes of CO₂ equivalents – approximately 27% of our total CO₂ emissions. Due to the increase of our project portfolio in the upcoming years, we expect the share of our scope 3 emissions to rise to even more than 50% of our total CO₂ emissions.

To better understand and address the scope 3 carbon emissions arising from our supply chain, we are working on a 'Decarbonising the Supply Chain' project. We aim to gain more insight into the carbon footprint of our purchased and capital goods and services. Life cycle assessments (LCAs) provide insights into the life cycles of our assets, revealing the biggest carbon emission contributors along our supply chains.

Our first findings specifically indicate that the biggest contribution to our scope 3 emissions lies in the upstream production of materials, such as steel, copper, aluminium, concrete and plastics. The transport of assets to our project sites and the installation of these assets also play a significant role. Based on these insights, we have started this year in twelve asset categories, which were identified to be among the strongest contributors to our scope 3 emissions, to develop and implement sustainable sourcing strategies together with our partners. Switching material supply to low-carbon alternatives, incentivising suppliers to

increase the use of green energy in production, transport and installation and identifying possibilities to increase circularity in our supply chains are examples of potential measures identified in these sustainable sourcing strategies.

We are increasingly considering sustainability to a greater extent in our supply chain. Next to LCAs, we use tools such as the Environmental Cost Indicator (ECI) to incentivise our suppliers to measure and reduce the environmental impact of the products and services we buy from them. By giving the environmental saving a monetary value through the ECI, we can also gather more data on our environmental impacts, as suppliers are encouraged to provide more transparency on their product lifecycle emissions in our tendering process. Furthermore, we have offshore framework agreements in place that require all our suppliers to submit a sustainability management plan to show how they understand and manage their carbon footprint.

We can expect scope 3 emissions to become a greater challenge as our project portfolio increases, and quickly. We have set targets to reduce our emissions in this scope by 30% by 2030, but TenneT projects take a long time to develop and often include multi-year contracts, such as our 2GW project framework agreements. In order to reach our targets in the stated timeframe, we need to think ahead and make choices now that will support them in the future.

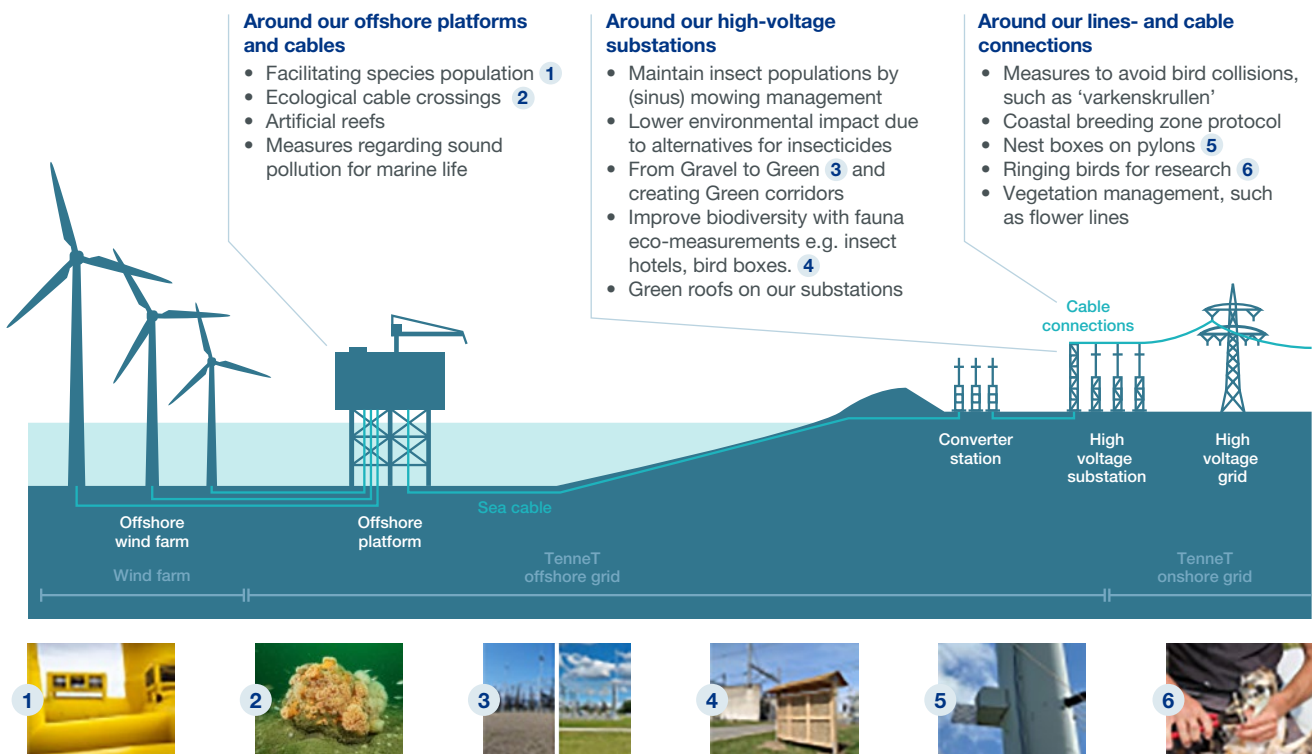
Mobility as a result of our own activities

With respect to the smaller sources of scope 3 emissions, we continue to improve our policies on mobility, motivating employees to make more environmentally friendly choices in the way they travel for work. We integrate our Mobility Vision with our hybrid and flexible working, so that employees can choose the means to do their job in the best way possible.

A partnership with the German rail operator Deutsche Bahn is one of the green mobility initiatives we have taken, encouraging employees to travel by train for climate-neutral journeys, as well as a bike-leasing scheme for our employees in the Netherlands and Germany.

As we grow our operations, with more employees and more projects, we want to avoid our emissions also going up. That is why we set absolute carbon emission (science based) targets. With a growing project portfolio and a growing workforce, this is not an easy challenge. However, we believe this approach will enable us to make better choices.

Nature measures



As a result, we were able to green 33% of our overall carbon footprint. If we would have used the same scope as last year (as in 2023, we updated the scope of our carbon footprint regarding our purchased and capital goods and services in scope 3), we would have greened 41% of our overall carbon footprint. This would have been an increase of 6% compared to prior year (35% in 2022), but we record the same percentage this year due to this scope change. Please note that these percentages are based on a location-based calculation. When using a market based approach, this would be respectively 30% and 36%.

TenneT's sustainable Revolving Credit Facility: linking climate performance to finance

To make progress against our climate ambitions even more visible, we have linked our financing costs to our climate performance. Secure access to finance is essential to ensure that we maintain the pace of our investment portfolio. An example of this is our EUR 3.3 billion sustainable Revolving Credit Facility (RCF), which is linked to sustainability performance indicators and targets. In practice this means that, depending on the realisation of our climate-related KPIs, a discount is applied to the interest margin of the RCF. This is related to the green percentage of energy use of our stations (100% in 2023 vs 100% in 2022) and our offices (100% in 2023 vs 100%

in 2022). It is also linked to the net carbon impact of mobility per employee against the total number of employees (1.0 in 2023 compared to 1.4 in 2022) and the net carbon footprint of leaked SF₆ gas divided by theoretical CO₂ impact of banked SF₆ (0.11% in 2023 compared to 0.15% in 2022). To reduce our CO₂ footprint, we compensated for a part of our leaked SF₆ and mobility through carbon offsets of renewable energy and solar cooktop projects in India. Also, we have agreed upon targets to realise a reduction of our scope 1 and scope 2 emissions compared to the base year of 2019, which was a 26%* reduction when comparing 2023 with 2019 (based on a location-based approach).

Nature

While our work driving the energy transition contributes to a long-term positive impact on reducing carbon emissions and harm to nature from climate change, TenneT's activities also have a negative impact, as we build, maintain and operate our assets in the natural environment. By leading as a green grid operator, we aim to reduce our negative impacts - such as on biodiversity and the possible environmental impact related to building, maintaining and operating our assets (e.g. oil leakages) – while maximising our positive impacts. TenneT's goal is to reduce our net impact on nature to zero.

* not assured

To make progress on our biodiversity ambitions, we include details on nature commitments in our investment plans. Currently, for each proposed investment, a 'Commitment to Nature' paragraph details a description of the anticipated impact on nature, the measures to mitigate, and the opportunities for positive impacts. In 2023, 100% of our investment plans contained such a section.

To take action to reduce our impacts on nature, we carefully track the number of environmental incidents, such as leakages of SF₆ gas, oil leakages from our assets, and other occurrences. In 2023, we recorded 190 environmental incidents (compared to 97 in 2022). As the amount of investments and the activities needed to drive the energy transition increases, the number of instances that this could happen also increases. However still this increase of environmental incidents is something that we are displeased with. We notice that a key driver for this increase relates to bentonite releases in our offshore activities. Bentonite is a type of natural sodium clay. The fact that we see improvements in the reporting of these incidents is a positive step. Next to this, we recorded 2,698 litres of oil leaked from cables in 2023, which is a slight decrease compared to the 2,762 litres reported in 2022. For both the environmental incidents as well as the oil leakages from cables, we consider every incident that occurs one too many and we are aiming to learn from the root causes of these incidents. An example of this is that we are aiming to optimise our average repair time for oil leakages from cables. We are monitoring how many days on average this takes to repair and aim to reduce this on a daily basis.

Since the introduction of this metric, we primarily focused on the Dutch oil cables as this required the most of our attention and in Germany we predominantly do not make use of these types of cables. We do have these types of cables in Germany as well, which was confirmed in 2023. Based on our current insights, this is significantly a smaller amount of cables than in the Netherlands (approximately 6 kilometres of cable). We are currently updating our reporting to have them appropriately included in this metric. As these types of cables have oil pressure meters which are connected to our systems, we are not aware of any oil leakages from cables from our German activities. In 2023, we began oil pressure sensing to gain more and quicker insights into potential oil leakages to reduce our negative impact. We launched a pilot for two 150 kV lines in Area West, which provides real time data on the status of our assets.

We also launched an inspiration guide for nature-inclusive building. Its purpose is to provide a toolbox to make nature-inclusive building the standard approach.

The impact we have or aim to create relates to where our assets are located when building, maintaining or operating them. This is mainly around our offshore platforms and cables, around our high-voltage substations and around our lines and cable connections. Taking into account the biodiversity around these areas is an important part of our sustainability ambitions.

Biodiversity measures around our onshore assets

Examples of how we make our policies regarding the biodiversity around our assets on land actionable are by working together with other infrastructure parties in the Netherlands to increase biodiversity in collective areas through the 'main ecological infrastructure'. Furthermore, we also embed these focus areas in policies on how we should carry out our maintenance and construction work, to ensure that we comply with nature conservation laws.

TenneT promotes sustainability at substations by applying green measures. Gravel areas near substations will be transformed into green spaces, provided our operations can continue. The revised Programme of Requirements (PoR) allows for alternative gravel solutions with grass and flower mixtures based on soil types. Some results so far include our Vijfhuizen and Meeden stations for instance.

Considering our direct impact on nature and wildlife, we try to reduce danger to bird life (and damage to our assets) by working with the right partners to identify high-risk bird spots and to implement preventive and animal-friendly bird barrier measures. We also work to protect nature in the immediate vicinity of our assets. Examples include making our lines better visible for birds by hanging up plastic curls (so-called 'varkenskrullen'). Also, on the Maasvlakte in the Netherlands, TenneT has started a pilot project to keep breeding gulls away from critical parts of the high-voltage substation. Lasers will be tested over the next few years to see if the birds will permanently avoid the high-voltage installations for breeding purposes. If the pilot is successful, it is expected that the lasers will be used on a larger scale at our high-voltage facilities.

Watch our pilot on the Maasvlakte on [vimeo](#).

Some species of nesting birds, such as peregrine falcons and kestrels, often nest in and around our assets. These can be found breeding at our facilities in Krimpen, Maasvlakte, Diemen and Vijfhuizen. To protect the birds and our assets, we are taking measures to prevent new nests in the installations before the start of the next breeding season. Furthermore, regarding our 150kV overhead line trajectory between Dodewaard and Ede, close to Wageningen, TenneT conducted a pilot with drones to hang wire markers for birds - a first in the Netherlands.

Usually, TenneT works with helicopters or cranes and climbers are used to install wire markings. Using a drone is both more environmentally friendly and cost-efficient, as it does not require heavy machinery on land or helicopters to fly.

Biodiversity measures around our offshore assets

Examples of how we address this around our offshore assets are related to the concept of 'Nature-Inclusive Design' (NID). Here, projects are part of TenneT's efforts to reduce the environmental impact of expanding the offshore grid. Several projects have already integrated eco-friendly designs and ecological measures, such as fish enclosures and ecological landscaping measures.

An example of how we apply Nature Inclusive Design, relates to the Hollandse Kust (zuid) project. For this project, where we realised this offshore grid connection system, we have laid cables from the platform to the coast near the Maasvlakte. To protect the cables at crossings with oil or gas pipelines, for example, a protective top layer of stone was laid over the cables. The first results of our marine life survey around these sea cable crossings found a source of biodiversity around these crossings with about 48 different species. This research will be continued to analyse the differences between different types of stones and their effect on biodiversity. Another example relates to another offshore grid connection system, Hollandse Kust (west Alpha). Together with one of our contractors, we placed artificial reefs near this asset.

Circularity

TenneT depends on large amounts of different materials to operate, reinforce and expand our grid to facilitate the energy transition. The extraction, refining, use and disposal of these materials is one of the key drivers of the negative environmental and societal impacts we have as a TSO. Additionally, increasing global use of these materials, as well as recent crises and geopolitical tensions, have led to increased scarcity of and competition for these materials.

This has resulted in considerable risks for our business through supply chain disruptions, increasing material prices and price volatility as well as longer delivery lead times. Shifting from a linear to a circular use of materials is therefore of vital importance for us to connect everyone with a brighter energy future and to lead as a green grid operator. We believe that the shift to a circular economy is possible and that TenneT can make a significant contribution by increasing circularity within our activities and by promoting circularity with our partners.

To address this ambition in a targeted way, we developed our first Circular Economy Strategy in 2023. With this strategy, we want to take the next steps in our journey towards a circular way of working and update our previous approach. Through a broad involvement of different business units, we have developed a common understanding of circularity for TenneT, a mission statement, a circular economy framework as well as targeted KPIs to measure our performance. Our mission is to optimise the use of materials and reduce our dependency on virgin materials. We want to do so by embedding circular design, circular procurement and circular recovery in our activities and by focusing on a number of key materials and assets. We start implementing this strategy by measuring and increasing the circularity of our copper inflow, as well as the circularity of our material outflow.

To measure and improve the circularity of our material inflow, we are increasingly implementing circularity requirements in our tenders and our procurement strategies. One important step we have implemented over the years is to request our suppliers to fill out 'raw material passports' and conduct LCAs for their products. These give information about the quantities and sources of materials, to what extent they can be recovered at end-of-life, and their resulting environmental impact.

As well as improving insights, sustainability criteria can also stimulate innovation. For example, our use of the Environmental Cost Indicator in tenders provides an incentive for our suppliers to find ways to increase the circularity of their products. For instance, a response from one of our tenders has opened the way for us to have power transformers using 100% recycled copper in the future. To completely close and even shrink the materials loop, we're investigating how copper from obsolete TenneT transformers could be used to create new ones. In 2023 we had a total copper inflow of around 5,100 tonnes, 36% being circular.

As we expand our grid with material-intensive assets such as cables, transformers, substations, offshore platforms, steel towers and overhead lines, the competition for materials increases. As such, all players in the energy industry need to think of how they can achieve their energy transition goals, by optimising their use of materials, stimulating circularity, and minimising waste.

Many of the impacts described in this chapter are a part of our most material impacts. This is where we will also report more extensively on, in light of meeting the Corporate Sustainability Reporting Directive (CSRD) requirements. TenneT will need to comply to this legislation as of 2024. An example of this is how we have started to further improve our internal waste reporting processes throughout the different parts of the organisation. We have laid out clear definitions, requirements and processes for waste reporting and are currently investigating possibilities to further digitalise waste management and reporting processes. This will ultimately enable us to measure and increase the circularity of our material outflow in a much more effective and targeted way. In 2023, 75 - 90% of our material outflow was recovered. More information on our progress in complying with upcoming CSRD legislation can be found in the [‘About this report’](#) section.

What could prevent us from reaching our goals?

As our activities and operations grow in the coming years, it is expected that our impact on carbon emissions will grow simultaneously. While we try to reduce our footprint, it remains a challenge to balance our growth with a lower footprint.

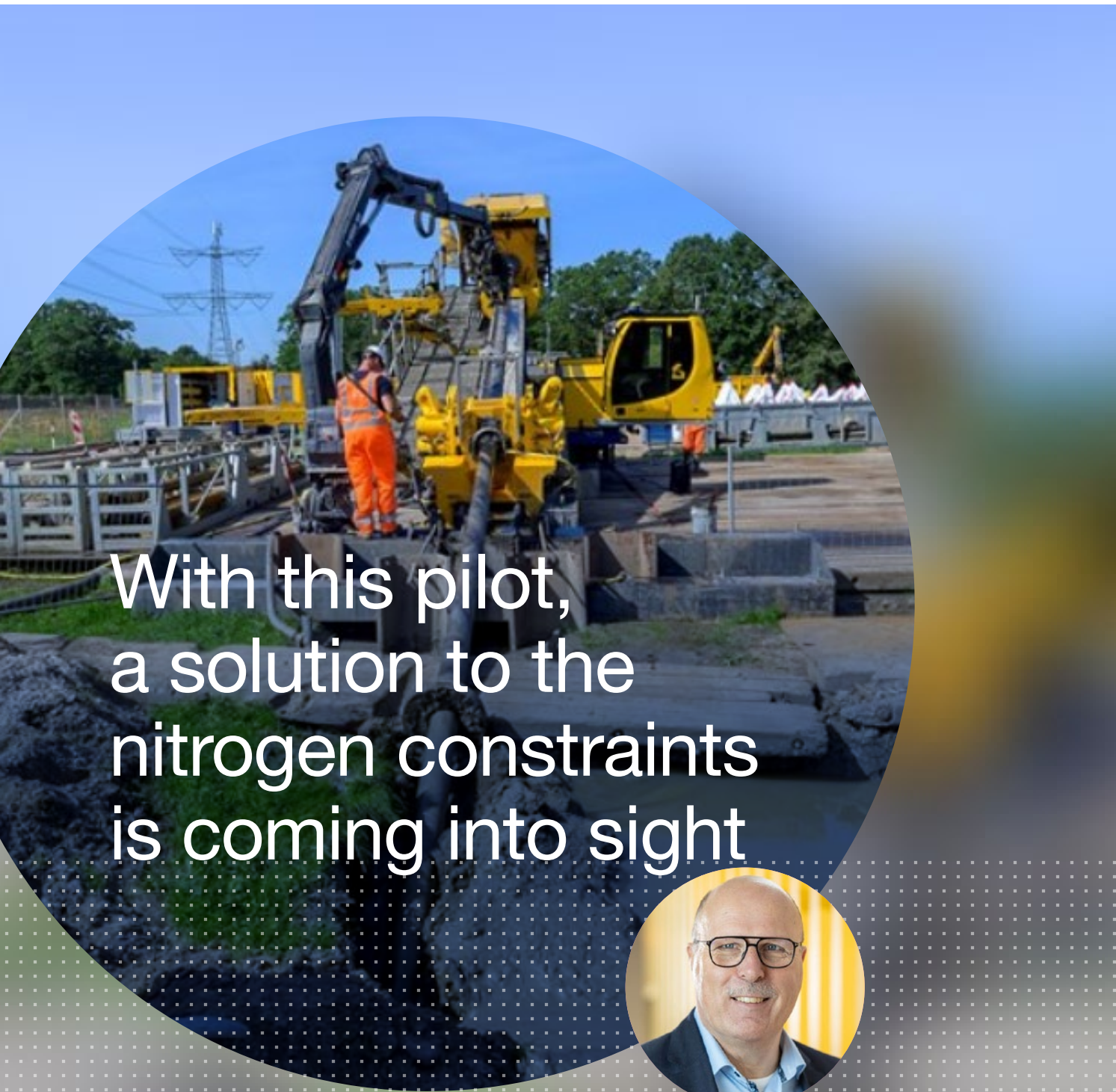
Grid losses are a major contributor to our carbon emissions – accounting for 75%. Unfortunately, the nature of power transmission makes grid losses inevitable. By using more aluminium instead of copper as a conductor in our power lines, we can reduce our usage of resources that are scarcer than others. However, this has the effect of higher grid losses as aluminium is a less effective conductor.

Furthermore, as our network grows onshore and offshore and by using more long-distance high-voltage connections, grid losses could grow proportionally higher. With the right technology developing the grid of the future, we will strive to reduce our carbon emissions.

Regarding SF₆ leakages, which currently accounts for less than 1% of our climate footprint, we are working hard to reduce our use of this insulating gas. Therefore, we continue to work with our partners in both Germany and the Netherlands to find and implement sustainable solutions. We are also taking technical measures to prevent or reduce the loss and leakage of other environmentally harmful contaminants, such as oil and other gases and liquids. Mitigation measures such as extra containment beneath transformers and oil-water dividers can help reduce the risk of harm to biodiversity around our operations. We also perform regular monitoring of our asset condition, through maintenance and procedural control.

Resource circularity will become increasingly important in the years ahead. The scarcity of materials and the reduced usage of oil puts pressure on alternative resources. To this end, we are changing our tender procedure to include stricter circularity requirements, for example by asking suppliers to provide evidence of the percentage of their materials that are recyclable and recycled with ‘raw material passports’. We are also intensifying our use of LCAs, which allow us to calculate the lifetime environmental impact of products used in each project over their lifetime.





With this pilot, a solution to the nitrogen constraints is coming into sight



Henri van der Kamp
Managing director Van Gelder Group

“The key to making construction sites more sustainable lies in solving the logistical problem of sustainably charging heavy equipment on site. Thanks to the unique controlled horizontal drilling pilot that Van Gelder carried out for and with TenneT near a Natura-2000 area in Brabant, we are a step further in solving this puzzle. Not only was this pilot the first time a fully electric 235-tonne drilling rig was deployed in the Netherlands. It was also the first time that the electricity required for drilling was generated sustainably. With this pilot project, a solution to the nitrogen constraints in the expansion of energy infrastructure is really coming into sight.”

Safeguard sustainable financial performance

The urgency of the energy transition is increasing as European governments strive to achieve 2030 and 2050 climate targets. However, the cost of decarbonising the energy system is also rising, intensifying the debate about affordability. As one of the largest investors in the energy transition in Europe, TenneT is creating long-term value for society, while also safeguarding our financial health and delivering a return on capital that meets the expectations of our capital providers.

Introduction

As a leading electricity transmission system operator in Europe, TenneT is deeply rooted in society. We serve people in the areas where we operate by securing supply of electricity while at the same time supporting the societal needs of decarbonisation and helping to realise the energy transition at an acceptable cost.

In order to provide long-term services, safeguarding our financial health is of paramount importance. Designing, building, maintaining, and operating a future-proof grid comes at a cost which businesses and ultimately end-consumers carry via the payment of grid fees and levies in their respective energy bills.

TenneT takes its responsibility to society very serious. The choices we make have a financial impact and are therefore considered carefully when we balance affordability with reliability and sustainability. Securing supply today and tomorrow, especially at the high level of availability our end-users expect in the Netherlands and in Germany, requires substantial investments.

To support a renewables-based future energy system, we must expand and renew the onshore and offshore grid, while also maintaining our existing assets and taking measures to balance the grid, among others, through the procurement and use of ancillary services.

Over the past two years, in the wake of the energy crisis when gas prices soared following Russia's invasion of Ukraine, the cost of the energy transition has increased. In addition to higher infrastructural costs, society also faces the higher transitional cost of congestion management as the energy system becomes increasingly electrified. This is partly caused by the move towards net zero and partly by a desire to strengthen energy security in the European member states.

As a result, the affordability of the energy transition is becoming a widely debated political topic.

Although Europe's political climate targets seem far away, in terms of grid development, they are close on the horizon. To build a futureproof energy system that can support a sustainable economy by 2045, we need to maintain the momentum of our investments.

With carefully managed energy system planning, the investments set out in our Target Grid 2045 give economies more time to adjust to green investment and the energy transition and will create a future-proof backbone for a fully decarbonised energy system. As such, TenneT's investments in reinforcing, expanding and modernising the grid are not just about affordability today. They are about long-term affordability and security of supply for society in the future.

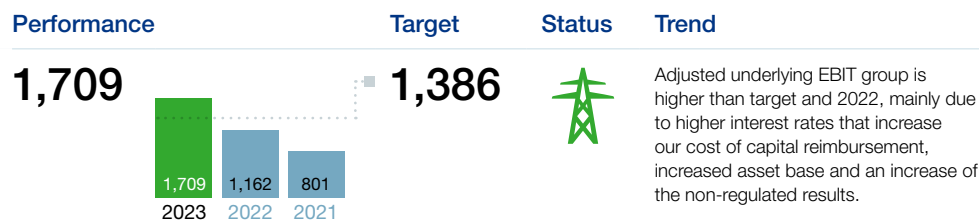
Financial solidity of our company is a prerequisite to be able to invest in the energy transition. Therefore, our mission to safeguard our financial health remains unchanged. We do this by delivering a return in line with what our capital providers expect, as well as by raising the required external financing. The latter is supported by our financial policy to maintain a senior unsecured credit rating of at least A3/A-. TenneT does not seek short-term profits; in principle, we invest for periods of several decades. However, we do aim for adequate and sustainable returns on our investments, as this ensures to sustainably maintain and operate our grid and enables us to make the necessary investments in the energy transition going forward.

In 2023 TenneT implemented SAP S4/HANA as new enterprise resource planning system after a preparation by many colleagues over the past two years. While TenneT initially experienced some technical implementation issues, the system run reliably and relatively stable at year-end 2023 and enabled us to prepare the financial close with it for the first time. The first components of a new application for managing German levies were also put into operation.

Our performance in 2023

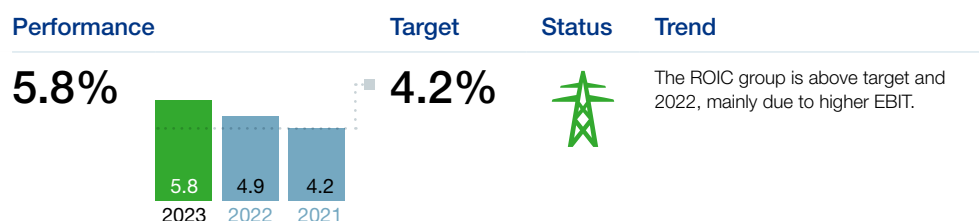
Healthy financial operations

Adjusted underlying EBIT group¹
(EUR million)



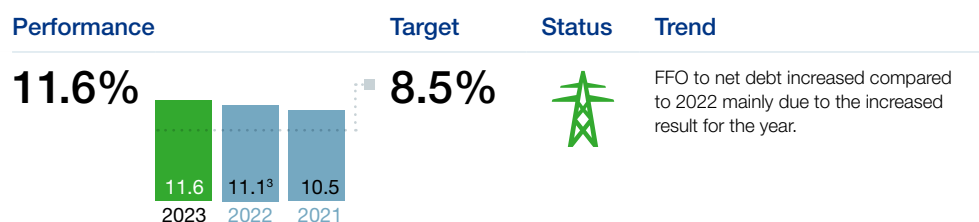
Satisfied capital providers

ROIC group (%)



Safeguarded capital structure²

Adjusted FFO/Net debt group¹



¹ Reference is made to next page.

² Reference is made to Note 19 of the financial statements.

³ Adjusted from 9.7% to 11.1% due to changed definition of debt.

This application will be used to manage the electricity revenue cap in Germany for which TenneT is one of four trustees assigned by energy law. The aforementioned implementations were challenging, yet successful and had an impact on internal control and changed processes.

Underlying revenues and EBIT

Underlying revenue decreased by EUR 618 million to EUR 9,222 million.

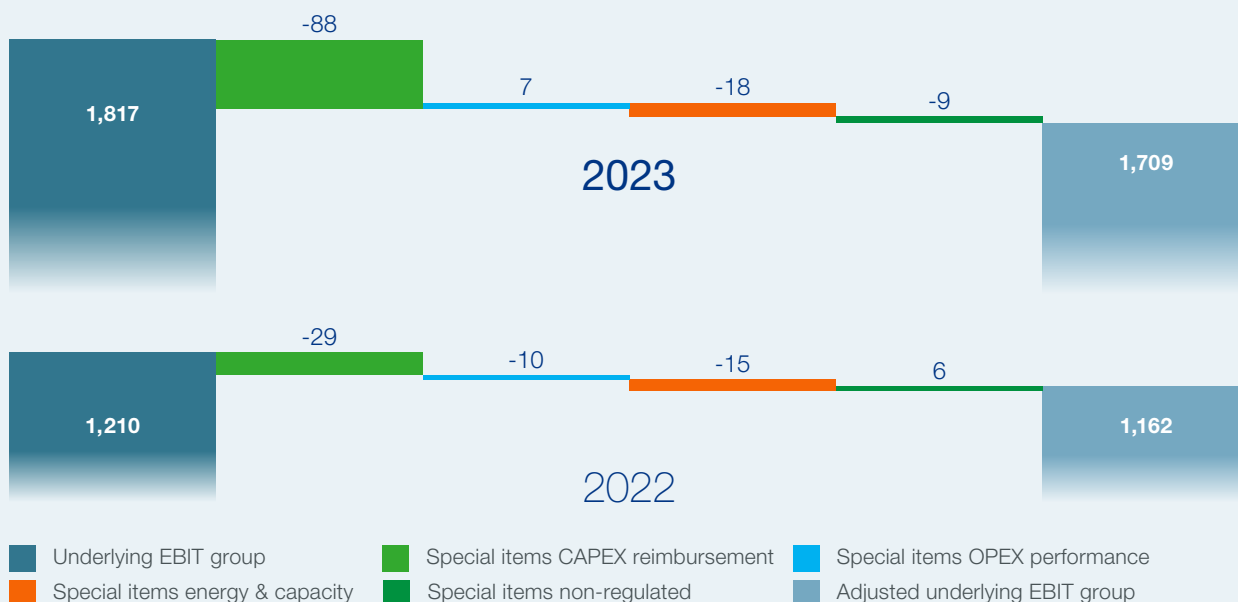
The lower costs for ancillary services in 2023 compared to 2022 resulted in lower underlying revenues, since those costs will be settled through future tariffs, or are directly offset by auction receipts. This decrease in revenues is partly offset by the increased regulatory reimbursements due to rising interest rates. Furthermore, revenue increased due to ongoing investments, resulting in a growing regulatory asset base and higher onshore and offshore revenues.

The underlying operating result (EBIT) increased by EUR 607 million to EUR 1,817 million. The increase of EBIT is partly caused by higher compensation in tariffs as a result of increased regulatory reimbursement due to higher interest rates. Higher interest rates are vice versa resulting in increased finance expenses which are not part of EBIT. Other factors driving higher EBIT in 2023 were the strongly grown investment volumes which led to an increase in the reimbursement of capital costs as well as higher results from our non-regulated joint venture, BritNed.

Another significant factor was The Trade and Industry Appeals Tribunal ('College van Beroep voor het bedrijfsleven') court ruling on Transmission System Operator Method Decision, issued in July 2023. This granted a higher revenue entitlement for TenneT for the current regulatory period, resulting in an aperiodic one-off effect in the 2023 results (see 'Contribute to achieve a reliable and predictable regulatory framework which supports our financial strategy').

Underlying EBIT group*

EUR million



* Refer to note 3 of the financial statements.

For the TSO Netherlands segment, EBIT amounted to EUR 548 million (2022: EUR 312 million) and for the TSO Germany segment to EUR 1,141 million (2022: EUR 791 million) during this period. For our non-regulated businesses EBIT amounted in 2023 to EUR 128 million (2022: EUR 107 million).

The adjusted underlying EBIT increased from EUR 1,162 million in 2022 to EUR 1,709 million in 2023.

Ancillary services costs

Ancillary services are the costs TenneT must incur, in particular, to compensate for grid losses, to maintain the energy balance in the grid, and to pay for alternative routes for the electricity when grid sections are congested or unavailable due to grid expansions. As ancillary services require TenneT to procure electricity, these costs are directly affected by electricity market prices. From 2021 to 2022, Europe suffered a double supply shock, both in gas and electricity generation. In 2021, gas prices rose due to a combination of factors, including an increase in global demand for energy as the world economy recovered from the COVID-19 pandemic and unfavourable weather hampering renewable and hydro generation. In 2022, the Russian invasion of Ukraine further led to a significant increase in energy prices, leading to higher costs for consumers and businesses alike, including TenneT.

Following mild weather, societal savings of fossil fuels, a diversification of gas supplies including LNG to Europe, and increased solar and wind output energy prices dropped significantly and the energy markets became less volatile in 2023. As such, our ancillary services costs decreased from EUR 6,439 million in 2022, to EUR 5,065 million in 2023.

IFRS results

As mentioned in the section Future Forward, the German activities are no longer continued per 31 December 2023. In this section are however, the IFRS results including the German activities, as also disclosed in note 3 of the consolidated financial statements, 'Segment information'.

Underlying financial information is based on International Financial Reporting Standards (IFRS) as adopted by the European Union, plus the principle of recognising regulatory assets and liabilities for all of our regulated activities. This implies that amounts resulting from past events, and which are allowed to be received or are required to be returned through future tariffs, are recorded as an asset or liability, respectively.

TenneT's Executive Board believes that the presentation of underlying financial information provides additional relevant insight in the actual financial position, financial performance, and as such economic reality. By comparison, the

consolidated financial statements are prepared based on IFRS. Based on prevailing opinion on IFRS, it is not allowed to recognise amounts to be received or are required to be returned through future tariffs.

Our IFRS revenue increased by EUR 999 million to EUR 9,298 million. IFRS revenues mainly increased due to increased reimbursement of expected costs for ancillary services costs and higher regulatory tariffs. IFRS EBIT increased mainly due the increased revenues, decreased actual costs for ancillary services and increased result of our non-regulated joint venture BritNed, compared to 2022.

Investments and raising the necessary funding

In order to maintain our A-/A3 credit ratings and to realise our investment portfolio, TenneT's financial policy is to realise a ratio of long-term average funds from operations (FFO)/Net debt (based on adjusted 'underlying' financial information) of at least 8.5% (with individual years of at least 8.0%). This is in line with the (most strict) requirement to maintain an A-/A3 credit rating as formulated by the international rating agencies S&P and Moody's. TenneT's large investment programme will put pressure on the FFO/Net debt ratio. Therefore, TenneT is exploring together with its shareholder the Dutch state a potential sale of its German operations to KfW/German State. A second parameter we focus on is ensuring that our regulated returns on invested capital (ROIC) are higher than our weighted average cost of capital (WACC). Both of these aims were met in 2023.

The investments significantly increased to EUR 7.7 billion, which is mainly related to our 2GW Program, where framework agreements and contracts were awarded to create fourteen 2GW connections. This is the largest investment in a single year in the European energy transition. During 2023 we also met other key milestones in our investment programme, such as the completion of the Hollandse Kust (noord) and Hollandse Kust (west Alpha) grid connections. In Germany, 2023 saw the completion of DolWin6, the West Coast Line and the start of construction of SuedLink.

To realise investments such as these and build a grid that is future-proof, it is essential that TenneT maintains a broad and sustainable access to financing readily available and at the right cost.

Part of those funds come from equity and the majority from borrowings. In June 2023 TenneT received a contribution from our Shareholder of EUR 1.6 billion. Given the conditions precedent, the contribution is classified as current financial liability instead of equity.

As regards debt, TenneT secured a sustainability-linked term facility loan agreement of EUR 8 billion with a tenor of 2.5 years, also in May 2023. The facility is the largest sustainability-linked term loan ever. The facility was undrawn as of 31 December 2023. In 2024, TenneT and the Dutch state have made arrangements regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress.

Our financial strategy is focused on maintaining our credit rating at a minimum of A-/A3 and generating returns on investment in accordance with our risk profile. Our A- credit rating from S&P and our A3 rating from Moody's were again confirmed this year. Also, our ESG evaluations were reaffirmed by external rating agencies. For example, S&P again classified us as 'strong' with a score of 86/100 and Sustainalytics indicated that TenneT is classified as a 'low risk' company, which indicates our exposure to industry-specific ESG risks and the manner in which these risks are managed.

The adjusted FFO/Net debt ratio increased from 11.1% as of 31 December 2022 to 11.6% as of 31 December 2023. The increase is mainly caused by the increased result for the year. In the integrated annual report 2022, TenneT has reported the FFO/Net debt ratio including (adjusted net debt) and excluding regulatory receivables (net debt), like 'to be settled in tariffs'. As of 2023, TenneT only reports the FFO/Net debt ratio including 'to be settled in tariffs' because this is the ratio TenneT steers on. The comparative figures have been adjusted accordingly and the FFO/Net debt ratio increased from 9.6% to 11.1%.

Contribute to achieve a reliable and predictable regulatory framework which supports our financial strategy

Stable, reliable, transparent and predictable regulation plays a critical role in our investments and operations, helping to enable security of supply, while also fostering and incentivising innovation and progress. Regulation also provides the framework we need to attract equity and debt

capital for future investments in grid expansion, replacement and maintenance. On top of that, regulation also serves to maintain affordability of grid fees and energy prices towards industrial customers and end-consumers.

As the nature of our business and the scale of the energy challenge require us to think decades ahead to determine how and where to invest, we need to rely on a regulatory framework with a long-term focus. While regulatory periods are established for much shorter timeframes of typically five years or less, the underlying methodologies should provide a stable long-term regulatory framework in both the Netherlands and Germany. Grid operators need this solid regulatory foundation to earn a risk-adjusted rate of return on their investments, plus operational and ancillary costs.

Developments in Europe

From a European perspective, the European Network of Transmission System Operators for Electricity (ENTSO-E) organised the high-level grid forum: 'Future of our Grids – Accelerating Europe's Energy Transition'. This event was organised at the request of the European Commission (EC), recognising the crucial importance of electricity grids for the energy transition. The forum provided a platform for TenneT to convey regulatory viewpoints in the context of innovations and investments required for the energy transition, as well as the need for TSOs to receive a proper return on equity. In the EC's new Electricity Market Design package, it is explicitly stated that grid tariffs should be used to boost an optimised use of the grid, as they are seen as incentives for innovation and the use of flexibilities. The EC agreed on the need for a broader choice of investment instruments together.

Despite the satisfactory result, TenneT has an overarching regulatory challenge given the backward-looking approach of the incentive regulation in times of massive growth. Following general price trends and partly very tight markets, TenneT, like many other companies is facing rising OPEX (e.g. higher maintenance, personnel and IT-costs) in the its current regulatory period. In order to keep OPEX growth at an efficient level, cost development has to be in sync with the allowed revenues for OPEX. If and when this can temporarily not be reached, adequate countermeasures will be evaluated and launched to achieve at least a balanced OPEX result in the long-term.

The Netherlands

As part of the Action Plan Net congestion (LAN), the TenneT tariff revision (time of use) to support flexibility was endorsed by market parties, the Dutch Ministry of Economic Affairs & Climate Policy and the ACM. This means TenneT will implement a revised tariff structure with more incentives for users to apply grid-friendly behaviour.

TenneT's tariffs increase on average by 125% for Extra-High Voltage (EHV) and 80% for High Voltage (HV) in 2024. This increase was foreseen by TenneT and communicated well in advance to market parties, the Ministry of Economic Affairs & Climate Policy and the ACM in May 2023. TenneT's early and clear communication was well received by market parties.

In the Netherlands, the ACM concluded that TenneT has successfully complied with its commitments to make improvements designed to prevent power outages as much as possible. The ACM required TenneT to do this following an investigation into a power outage in the city of Eindhoven in 2018. As such the case is legally closed. The ACM however indicated that they wish to continue the dialogue on this topic on a semi-annually basis and asked TenneT to bring forward actions to further improve on security settings in our stations.

During 2023, TenneT appealed against the 7th Method Decision for the regulatory period 2022-2026 in the Netherlands, which had a significant financial impact. Appeals resulted in the ACM's benchmark scores for measuring efficiency being lifted to 100% and revisions made to the determination of weighted average cost of capital (WACC).

Germany

TenneT and the other German TSOs presented the provisional offshore grid levy 2024 to the BNetzA in October. Considering preliminary planned/actual cost deviations of former years, TenneT will include EUR 1.7 billion for the 2024 offshore grid levy which is consistent with 2023. After several statement letters, TenneT reached a final result which is mutually satisfactory for both TenneT and the regulator.

Grid fees and our impact on household electricity bills

Designing, building, maintaining, and operating a futureproof grid comes at a cost which households and companies and power plants for their electricity consumption contribute to via the payment of grid fees. Having assessed our impact on the electricity invoice (retail of electricity; taxes, charges and levies; grid fees) of an average household in the Netherlands and in Germany, our share in Germany was around 4.3% in 2023 (2022: 4.8%). The impact with respect to the electricity bill on households in the Netherlands is estimated to be approximately 8.7% in 2023 (2022: 9.1%). The share in Germany is decreased compared to 2022 due to the federal grant to reduce the grid fees. In the Netherlands the share decreased as a result of the fact that the other items of the electricity bill increased more than our part.

In December 2023 it has been decided that the four German TSOs will not receive another federal grant for 2024. Due to the ruling by the Federal Constitutional Court on 15 November 2023 regarding the second supplementary budget for 2021, the Economic Stabilisation Fund (ESF) was also indirectly classified as unconstitutional and is therefore no longer available as a source of refinancing for the 2024 grant. As a consequence, the nationally unified TSOs are now forced to adjust the grid fees for 2024, resulting in more than a doubling compared to 2023.

The share of TenneT's impact on household electricity bills will increase in the Netherlands and in Germany in the coming years, as the costs for the energy transition rise amid increasingly ambitious climate goals.

The final 2024 revenue cap for onshore has decreased by EUR -3.4 billion (-44%) to EUR 4.4 billion compared to the final 2023 revenue cap. The decrease is due to lower expected costs for congestion management (EUR -3.9 billion). Nevertheless, the costs for ancillary services remain at a high level, as a consequence of high congestion managements costs following the Russian war against Ukraine and rising energy cost.

In light of this development, the TSOs have been in discussion with the Ministry of Economic Affairs and Climate Action (BMWK) and the BNetzA with regard to a grant for the grid fees 2024. This follows an agreement made in 2022 that the German government would compensate for the higher grid fees that TenneT and other TSOs said they must charge in 2023 to reflect escalating wholesale power prices and ancillary services costs, such as redispatch. With grid fees accounting for around 4.3% of domestic energy bills and around 0.9% for industrial customers, the government's compensation helps to absorb the TSOs' cost increases.

What could prevent us from reaching our goals?

TenneT is the key driver of the energy transition, with investments increasing to at least EUR 10 billion per year in maintaining, operating and modernising the electricity grid in the areas we serve. With the growth of our asset base and our organisation, also our operating costs are increasing. Furthermore our operating costs are increasing, due to external factors such as inflation and market scarcities.

Exceeding the regulatory reimbursement of our operating costs results into a lower EBIT. Although partially inevitable due to our rapid growth in combination with a set reimbursement per regulatory period, we aim to reduce this OPEX gap as much as possible. We closely monitor our key OPEX drivers and set budgets balancing growth and potential for cost reductions as well as efficiencies. Furthermore, we are conducting cost analysis of the separation of our business in Germany, if implemented.

As the financial health of TenneT relies on our ability to attract the financing we need to realise our investments, and thereby fulfil our societal role, we need to balance the risks associated with our ability to raise additional equity while keeping our credit rating stable. The possible sale of TenneT's German operation to the German state is a possible action to mitigate this risk.



Thinking beyond national borders. For a secure and stable electricity supply



Klaus Müller
President of the Bundesnetzagentur
(Federal Network Agency), Germany

“Energy generation is changing. Just twenty years ago, wind and hydro power hardly played a role. Today, renewables account for about half of all Germany's electricity generation. Our electricity grids are more stable than ever. Since 2006, when generation was still dominated by fossil fuel, interruptions to our electricity supply have almost halved. Our future supply of energy must be secure, affordable and, above all, climate-friendly. That is the goal – not only in Germany, but in the whole of Europe. How to reach this goal is largely undisputed, too: carry on expanding renewable energy and the networks to transport the energy at a fast pace. To do this, we need low barriers and swift approval procedures. Building infrastructure means thinking well ahead into the future. And thinking beyond national borders. We are all connected to one other by power lines and cables and our policies should connect us all as well. The dialogue between our countries in Europe needs to be even closer in future, as security and stability depend on us creating networks together. The Bundesnetzagentur is doing everything it can to drive expansion forward, with the energy sector, policymakers and consumers firmly in its sights.”

Solve societal challenges with stakeholders and through partnerships

As a key player in the energy transition, TenneT is working in partnerships with a wide range of stakeholders and organisations with the aim to find the best solutions that will achieve a green and futureproof energy system. These partnerships are not only needed to harness the technologies and sustainable solutions required for the Target Grid 2045, but also to secure the people and financing we need to get there.

Introduction

The ambition for Europe to be the world's first climate-neutral continent by 2050, and to lower carbon emissions by 55% in 2030, has consequences for the whole of society. TenneT is among many players in the sectors of energy, engineering, finance, technology, academia, politics and beyond which are tasked with making this ambition a reality. TenneT's role is to design and build an electricity grid that is climate-neutral and can meet the future needs of a decarbonised economy, while maintaining a high security of supply and remaining financially healthy.

It's a huge task, and one that we are moving ahead with at full speed to achieve. The EU's dates for decarbonation may seem far away, but when it comes to planning, developing and building the needed high-voltage electricity infrastructure (onshore and offshore), 2030 is already tomorrow, 2040 is next week, 2050 is next month. In Germany, the government plans to reach net zero even earlier, by 2045.

This is why we take 2045 as the date by when we need to operate a future-proof, reliable and cost-efficient grid that can support a full sustainable energy system. This is the basis of our Target Grid 2045 strategy, giving us a clear roadmap of the infrastructure we will need to have in place by 2045, and the approach for how we will get there. This is not just about growing our infrastructure – the Target Grid 2045 will require smart solutions, innovative technology and the power of multiple partnerships. No single player can achieve the goals of the energy transition alone – that is why we work together with many stakeholders, collaborating across all of our strategic pillars.

This includes partnerships that will help to ensure security of supply, as the future grid that will rely on renewable energy sources that are by nature more volatile and intermittent, with innovations needed to maintain balance between electricity supply and demand and to provide new sources of flexibility. We also seek partnerships that drive the energy transition, as we need to build a grid that is reliable, affordable and sustainable for society, with TenneT leading as a green grid operator. More partnerships are required to ensure TenneT has enough people to achieve our fast-growing investment portfolio, improving our ability to recruit and retain increasingly scarce talent in a competitive market and to ensure our people are energised and motivated. And finally, we need to work with other important stakeholders to safeguard TenneT's financial health, as we cannot achieve our objectives without raising the necessary external financing and delivering a return in line with what our capital providers expect.

Our performance in 2023

To accelerate our plans for Target Grid 2045, while also improving the performance of our existing grid, finding the right solutions and the right partners to cooperate with are an important part of TenneT's strategy, with a large number promising and successful projects underway and planned.

We enter into partnerships to address key challenges TenneT faces in building, maintaining and operating a futureproof grid. These include working with governments and local authorities to tackle grid congestion. We also work closely with suppliers of new DC technology, as their innovations will allow us to build an integrated onshore and offshore renewables-based grid. We also face the challenge of driving the energy transition while minimising our negative impacts on the environment. For this, we partner with other infrastructure players on measures to protect nature and we co-ordinate with suppliers to find new emission-free solutions for our construction work.

Our partnerships with academic institutions and long-term framework agreements with suppliers help to ensure we have the talent we need to deliver on our goals, not only within TenneT but also in our supply chain. And to meet the challenges of affordability in the context of the rising cost of the energy transition, we work closely with regulators, relationship banks and investors to ensure we can work in a sustainable regulatory framework and we have access to the financing we need.

Partnerships to secure supply, today and tomorrow

In 2023, we were able to secure supply 99.99993% of the time. This level of grid availability is not a given – it is the result of the hard work of many colleagues and other partners every day. To ensure we are able to secure supply in the future as well, requires thinking and planning ahead, which we have brought together in the concept of the Target Grid 2045 strategy.

Society is already experiencing the effects of the energy transition on the electricity grid, as rapidly increasing demand for electricity and the higher in-feed of renewables places more demand on electricity transmission. To make sure we can facilitate this demand, and connect the growing in-feed of renewables, we need to expand, strengthen and modernise our onshore and offshore grid, providing a green energy backbone for a more sustainable Europe.

We already see some of the effects of when we are unable to succeed, with congestion in many regions of the Netherlands in 2023. Also in Germany, the situation could become more challenging if we do not maintain, strengthen and extend our grid to facilitate a higher infeed of renewables and connect this to where the electricity is consumed.

In this context, we are active in partnerships with many different stakeholders to tackle congestion in areas of our grid. Our work with the Energy Boards in the Netherlands, is an example of the partnerships we have with governments and other parties such as DSOs to address congestion in specific areas.

We also tackle grid congestion with partnerships that boost grid utilisation, helping us to maximise the use of our existing assets. This reduces the need to constantly expand our grid, and thereby benefits society by allowing us to drive the energy transition faster, with improved affordability and security of supply.

Examples of important partnerships in 2023 that help us address this challenge include our **Open Innovation Programme**, which is focused on solutions to optimise grid usage, thereby helping us to connect more customers to the transmission and distribution grids. As a result of this programme, a partnership with N-SIDE was formed that pitched a solution related to the challenge on how to make optimal use of the transport capacity and connection points to the electricity grid.

As well as overcoming the challenge of congestion, we also use partnerships to ensure our grid is future proof to secure supply today and tomorrow. In this respect, our partnerships are focused on grid expansion, market facilitation, system operations developments and flexibility.

As our Target Grid 2045 strategy also envisions a meshed onshore and offshore DC grid, linked by high-voltage DC (HVDC) corridors, and multi-terminal DC hubs, we need partnerships that help us overcome technological challenges, as many of the solutions needed to realise this vision do not yet exist.

A good example of a partnership that is focused on the development of this new HVDC technology, and thereby helps to enable the development of our 2045 Target Grid, is our **InterOPERA** programme. The InterOPERA consortium brings together a team of HVDC manufacturers, TSOs, sector associations and a technical university. This collaboration is designed to ensure that the HVDC technologies used in the future meshed onshore and offshore DC grid use standardised and inter-operable technologies that can be supplied by multiple vendors (as opposed to closed, proprietary systems). This will help TenneT to tender and procure its first multi-vendor HVDC system (and its building blocks) ensuring interoperability by design, while limiting technical risks.

To tackle the challenge of a future grid that is more dependent on renewable sources and securing supply not only today but also tomorrow, especially that of an increasing share of offshore wind generation, an important partnership is our **FUTURESYSTEM** project. Here, together with the Technical University of Delft, TenneT is investigating the risk of an unstable electricity system. The project findings will form the basis for new operational principles for both offshore and onshore multi-energy hubs.

Another important development to make our system operations resilient for years to come is our **Control Room of the Future (CROF)** programme. With this, we are making TenneT's grid control centres future-proof and equipped to manage our increasingly data-driven grid. The project will also help us to increase grid utilisation and automation. The CROF programme includes projects where TenneT is partnering up with external stakeholders to enable the acceleration of energy transition and tackle the social challenges. An example of this relates to Power Grid Boost, where TenneT focusses on mid-term long-term congestion management. Here, we are working together with other stakeholders such as educational institutes and several other Dutch DSOs.

In the end, we need flexibility to ensure we can balance supply and demand of electricity in a changing energy landscape. The concept of flexibility relates to how TSOs make use of energy sources to call for the required capacity when needed and switch off capacity when there is access. This is necessary to balance the grid at all times. An important topic in this is to have data available for society to enable them to make the right choices at the right time to support us in this by using excess electricity when this is the case. That is why we are working in partnerships with other stakeholders like TSOs and others like technology companies to provide these insights and data.

Examples of these are to the Nationaal Energie Dashboard in the Netherlands and the CO₂-Monitor in Germany. We also started the **energy data-X** in Q4 2023, which is focused on secure and sovereign data exchange amongst energy partners. In addition, new developments on the Equigy partnership, a crowd balancing platform which enables consumers to contribute to balancing the grid via smaller flexibility devices such as home batteries and electric vehicles. Through this partnership, 2 gigawatts were made available this year to make use of in the aFFR capacity.

Next to this, German heat pumps were also enabled to be connected to this platform. These partnerships help us to balance the grid in a more volatile and intermittent electricity system addition, new developments on the Equigy partnership, a crowd balancing platform which enables consumers to contribute to balancing the grid via smaller flexibility devices such as home batteries and electric vehicles. Through this partnership, 2 gigawatts were made available this year to make use of in the aFFR capacity. Next to this, German heat pumps were also enabled to be

connected to this platform. These partnerships help us to balance the grid in a more volatile and intermittent electricity system.

Partnerships to drive the energy transition

As a TSO, we face the ongoing challenge of ensuring we make progress in driving the energy transition, while also minimising our negative impacts on the environment. As we work towards Target Grid 2045, we want to build a grid that will ensure reliable, affordable and sustainable access for society. That is why we try to lead as a green grid operator, contributing to a future greener energy system. To be able to meet the milestones in Target Grid 2045, we need to focus on the requirements of a future and greener energy landscape and work together with stakeholders and in partnerships to make progress. In the case of the nitrogen challenge in the Netherlands, we need to work with partners to address key challenges that are stopping our work.

Examples of collaborations that support our aim to lead as a green grid operator include our work with Van Gelder, as we pilot our **first emission-free drilling** for underground cable installation, at a site near Breda. The drilling rig was powered by green electricity, with no nitrogen or CO₂ emissions. In October, our CEO Manon van Beek signed the covenant 'Schoon en Emissieloos Bouwen' (Clean and Emission-Free Construction) on behalf of TenneT to partner up with other (construction) partners in this initiative. Innovative solutions like this could provide solutions to help us overcome the nitrogen impasse in the Netherlands, which is a challenge as we strive to realise our projects on time. Our participation in the **Groene Netten** (Green Nets) collaboration, between eight major infrastructure players in the Netherlands, is also helping to ensure a sustainable transition to a climate-neutral economy. The partners, including Gasunie, KPN, ProRail, Dutch DSOs and Rijkswaterstaat are working together on projects that advance important sustainability issues, such as circularity and biodiversity.

Another challenge to our efforts to minimise our impact on the environment is the use of SF₆ insulating gas in our switching installations. As a harmful greenhouse gas, we realise the need to replace SF₆ gas with more sustainable alternatives that provide similar safety properties without harmful emissions. We are working closely with industry partners to explore and test SF₆ alternatives in our assets, for example with our new Hybrid Gas Insulated Switchgear partnership. Here, we are working with Siemens and Hitachi-ABB to provide a SF₆-free solution in the gas-insulated lines (see '[Create value to transition to a climate-neutral economy](#)').

In addition, we also aim to collaborate with our suppliers and contractors to reduce emissions upstream in our supply chain. That is why we are working on our **'Decarbonising the supply chain'** project. An example of how we are working together with the entire industry is in a new international Joint Industry Project, to develop common standards for measuring and evaluating sustainability in power transformers. The aim is to develop a standard so that there is transparent comparability. Only in this way is a fair benchmark possible in the industry regarding the approach, measurement and comparison of sustainability in our assets. More on the project 'Decarbonising the supply chain' is described in the chapter ['Create value to transition to a climate-neutral economy'](#).

In the end, the main impact we have on the planet by driving the energy transition and realising a Target Grid is by avoiding carbon emissions and facilitating a climate-neutral economy. We need new technologies and concepts to rethink the way we currently look at energy generation, transmission and consumption. One of the ways we are working on this relates to our partnership with Dutch DSOs and the gas grid operator Gasunie (as part of a working group organised with Netbeheer Nederland) to conduct studies on the optimal energy infrastructure required in the Netherlands between 2030 and 2050. The revised **Integrale Infrastructuurverkenning 2030-2050 (II3050)** was published in 2023, providing insight into what is needed for the transition to a sustainable energy supply, through a fundamental redesign of the energy system and extensive stakeholder co-operation.

Partnerships to energise our people & create a sustainable workplace

Due to the growing ambitions to accelerate the energy transition, TenneT's workload is rapidly increasing. We currently need to grow by around 850 FTE each year, eventually aiming to be able to accommodate a workforce of up to 10,000 internal and external employees by 2025. However, we're doing so in a challenging labour market, with a scarcity of new talent due to intense competition for personnel. As the energy transition is a global endeavour, we are one of many employers – not only other TSOs, but also other energy companies and contractors – who all need to scale up to deliver new projects. In this regard, TenneT does not only need to ensure it can recruit and retain the people it needs, but that our suppliers in the wider supply chain also have the personnel to deliver the work we need to achieve the Target Grid 2045.

To remain a competitive employer and attract new talent, our aim is to be an energising and sustainable workplace. This also relates to our efforts to create an inclusive and diverse workplace where people from all types of different backgrounds can thrive. These challenges require different ways of thinking, new collaborations and partnerships.

In the first place, it requires creating a safe and inspiring workplace where our people feel energised. This is what our people and leadership aim to do day in and day out. We also try to facilitate this in other ways, for instance via supporting and working together with the Johan Cruyff foundation. Here we provide means by giving back to society and enabling underprivileged children to do sports and exercise. At the same time, we offer our colleagues the ability to participate in sports events, such as the annual Johan Cruyff run, which are amongst other events part of our internal vitality programme, 'Always Energy'. More information on this is included in the ['Create a safe and inspiring workplace'](#) chapter.

Next to this, it requires attracting sufficient talent to deliver on the energy transition and being able to realise the target grid. **Academic partnerships** are a good way to educate, inspire and engage with new talent, not only supporting institutions to attract more young people into technical and engineering courses, but also forging pathways for that talent to grow their skills and careers at TenneT. We have academic partnerships with a wide range of academic and research centres, such as the University of Erlangen and Bayreuth, RWTH Aachen, TU Delft and TU Eindhoven. We are also working with the HAN University of Applied Sciences in Arnhem, with which we have extended our collaboration for another four years. To foster more specific education and qualifications tailored to our sector, we have also helped introduce the Power Minor, through collaboration with the universities of applied sciences of The Hague, Amsterdam, Arnhem and Nijmegen.

To grow, our workforce must also become more diverse, with inclusion as a pre-requisite for employee wellbeing. To this end, our ongoing work with initiatives like the **Refugee Talent Hub** is playing an important role in attracting new talent and reflecting our Inclusion and Diversity commitment.

And finally, partnerships play an important part in ensuring we have the right and sufficient resources and capacity available within the wider energy supply chain, as this is essential for us to drive the energy transition and realise the Target Grid. Our cooperation with key suppliers in the 2GW Program shows this in action, as the multi-year, large-scale contracts awarded for this work will help to attract more people into our sector with greater job security.

Partnerships to safeguard our financial health

In our journey to realise our Target Grid 2045 and enable carbon-neutral energy for society, we need to stay financially secure and healthy. Maintaining a stable regulatory framework and ensuring favourable conditions for raising external financing are essential for us to maintain our investments that drive the energy transition. These investments are expected to increase to EUR 160 billion in the coming ten years. This means working together with stakeholders that can provide us the option to finance future projects, and doing so with better conditions that help us deliver on our strategic ambitions and maintain affordability for society.

An important element in ensuring that we are able to safeguard our financial health is to work together with our stakeholders to contribute to a reliable and predictable regulatory framework that supports our financial health. That is why we engage in dialogues with our regulators and other market parties to discuss our strategy, the role of regulation and our need for financing to drive the energy transition. In 2023, for example, we engaged with the European Network of Transmission System Operators (ENTSO-E) in a high-level grid forum: "Future of our Grids – Accelerating Europe's Energy Transition". At this event, organised at the request of the European Commission TenneT communicated regulatory points of view regarding effective and cost-efficient solutions and the need for a proper return on equity for TSOs in a future energy system. The shortage of qualified human resources for TSOs, industrial partners and governmental authorities, was another major point of discussion. The EC agreed on the need for a broader choice of investment instruments together.

To finance the expansion of offshore grid connections, TenneT co-operates with external co-investors such as KfW-IPEX, Copenhagen Infrastructure Partners (CIP) and Chubu Electric Power. Via separate legal entities the co-investors contribute equity and receive financial

participation rights in return. Their contribution helps to ensure adequate financial ratios. Furthermore, their participation strengthens TenneT's interest in a reliable and stable regulatory framework as co-investors interests have been communicated to policymakers and regulators.

To secure a solid financing and ensure that we can drive the energy transition in an affordable way, we maintain strong relationships with our shareholder, the Dutch state, and with the banks that participate in TenneT's Revolving Credit Facility (RCF) – ABN AMRO, BNP Paribas, Commerzbank, Deutsche Bank, HSBC, ING, NatWest, Rabobank, Santander, UniCredit and SMBC. The term facility agreement of EUR 8 billion, secured during 2023, was crucial for our financing needs, as we did not raise funds through a Green Bond issue this year. The fact that the majority of our relationship banks also participated in this term facility agreement, show the strength of our long-term relationships. Through these partnerships, we are able to secure our financing (see Safeguard sustainable financial performance chapter).

What could prevent us from reaching our goals?

To be able to drive the energy transition and deliver on our purpose, for instance to achieve the Target Grid, societal acceptance is essential in keeping pace. Building new assets has an impact on the local communities who live in close proximity to our assets. For instance, one could look into the decision TenneT has to make between building overhead lines versus underground cabling. While the acceptance by local communities is higher for using underground cabling due to less visible impact on the landscape and perceived as additional safety (i.e. regarding high voltage lines and electromagnetic fields), this might impact not only the reliability but also affordability. It is more difficult to maintain an underground cable than an overhead line and hence it is more costly too.

Due to the current growing electrification predominantly in the Netherlands (i.e. Gelderland, Flevoland, Utrecht or Rotterdam), we face the increasing risk of congestion. For certain areas, the number of requests to be connected to our grid is significantly higher than we can cater for within reasonable time, or our local grid capacity is used to its maximum capacity such that there is no additional bandwidth left to connect new customers. Not being able to connect these customers, either large companies or consumers in general could result into negative media exposure and reputational damage. TenneT is currently

improving the approach how to connect new customers most efficiently, while balancing the issue of congestion management. One of the mitigation strategies is to step away from the 'first come first serve' principle, and instead take into account overall system effectiveness and efficiency.

Societal acceptance of the climate ambition is not only affected by the political landscape, but also by the speed of delivery and the financial cost of it. A high ambition to deliver on a green society, which a focus on electrification, could result into higher-than-average costs to realise these projects. Cost of materials and services are increasing due to unavailability, the conflict on our continent is still ongoing and with other conflicts in the world also, the energy price has not lowered to the price level before the year 2022. These higher costs related to the green ambition and delivering under these circumstances are in the end paid by society and could lead to lower acceptance by lower-income households and therefore affect our reputation.

Furthermore, a changing political environment can create uncertainty and slow our progress towards our ambition. Political change can also affect changing rules, regulations, or the regulatory environment in general. While this could be seen as a risk, it could also become an opportunity for us. It could be a catalyst when legislation and regulation are supportive of innovation, working together on (cross-border) partnerships and incentivising solutions for future challenges.

From all perspectives it is clear that our linear way of acting does no longer hold – it is a way of working that is simply unsustainable on the long run. Strong partnerships with our important stakeholders are crucial to achieve the 2025 and 2030 targets and ultimately deliver our Target Grid. Getting there will involve collaboration and negotiation but the destination of a clean energy future is shared by all. We aim to ensure we are a partner of choice to help solve these important societal challenges, to drive progress and to be part of the solution.



Certainty about availability of green power is crucial



Nienke Homan, chairperson VNCI
(Royal Association of the Dutch Chemical Industry)

“The transition to a sustainable economy is literally and figuratively leading to "system stress". Chemical companies, large and small, with far-reaching plans for sustainability, faced the limitations of the power grid. Both now and in the future. Certainty about availability and affordability of green power, among other things, is crucial for confidence that sustainability can be achieved in the Netherlands. In this, I am happy with TenneT as a partner that is willing to take responsibility for its own ever-changing role in a rapidly changing and demanding energy system.”

Statements of the Executive Board

The Executive Board is responsible for designing and operating TenneT's risk management and internal control system, and for reviewing its effectiveness.

Statement of responsibility

The Executive Board is responsible for designing and operating TenneT's risk management and internal control system, and for reviewing its effectiveness.

The risk management and internal control system consists of the following elements:

- The enterprise risk management system aimed to identify, analyse, define mitigating measures and monitor the development of risks relevant to TenneT;
- The internal control framework aimed to manage and control critical processes, including control self-assessments to document the effectiveness of control processes;
- Business plans and quarterly reports with information on financial and non-financial objectives and their achievement;
- Internal audits of key processes and follow-up on audit findings with relevant management;
- Actions based on recommendations made in the external auditor's management letter;
- An upwardly cascading internal Letter of Representation (LOR) process, resulting in a company-wide LOR signed by the Executive Board;
- A compliance management system that enables TenneT to demonstrate its compliance with relevant laws- and regulations, industry codes and standards, as well as its commitment to good corporate governance, best practices, ethics and stakeholder expectations among others risk of internal fraud, bribery or corruption.

The Executive Board periodically reviews and analyses the strategic, operational, financial and compliance risks to which TenneT is exposed. It also regularly assesses the design and effectiveness of the risk management and internal control system. The results of these assessments are shared with the Audit, Risk & Compliance Committee, acting as a committee of Supervisory Board, the Supervisory Board itself and the external auditor.

The risk management and internal control system does not provide absolute assurance that all corporate objectives will be fully achieved, nor does it give full assurance that material errors, losses, fraud or violations of laws and regulations will not occur in the operational processes and/or the financial reporting.

Taking the above into account, the Executive Board is of the opinion that TenneT's risk management and internal control system provides reasonable assurance that TenneT's financial reporting does not contain any errors of material significance and that the risk management and internal control system has operated effectively in the year under review.

In control statement

We confirm that, to the best of our knowledge, the financial statements for the period 1 January to 31 December 2023 have been prepared in accordance with IFRS as adopted by the EU, and with Part 9 of Book 2 of the Dutch Civil Code; that the disclosures in the financial statements are a true and fair view of TenneT's assets, liabilities, financial position and results as a whole; and that the disclosures in the Integrated Annual Report give a true and fair review of TenneT's financial performance, results and position, together with a description of the most significant risks and uncertainties the company faces. Furthermore, we confirm that to the best of our knowledge, the Group has adequate resources to remain in operation during the next 12 months and consequently the financial statements have been prepared on a going concern basis.

Arnhem, 4 March 2024

M.J.J. van Beek
T.C. Meyerjürgens
M.C. Abbenhuis
A.C.H. Freitag

The Executive Board



Manon van Beek

Chair Executive Board / Chief Executive Officer

53, Dutch (f)

Initial appointment:
1 September 2018

Expiry second term:
31 August 2026

Other positions qualitate qua:

- Chair Aufsichtsrat TenneT TSO GmbH
- Member Board TenneT Verwaltungs GmbH
- General Member Board of German-Dutch Chamber of Commerce DNHK
- Council of the Thinktank Agora Energiewende

Other positions:

- Chair Board Refugee Talent Hub Foundation
- Member Supervisory Board of the Delft University of Technology



Tim Meyerjürgens

Member Executive Board / Chief Operating Officer

48, German (m)

Initial appointment:
1 March 2019

Expiry first term:
29 February 2024*

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member Board TenneT Verwaltungs GmbH
- Member Board TenneT Offshore GmbH
- Chair Supervisory Board of GreenneT
- Member Executive Board WAB (Wind Energy Association Bremerhaven)
- Member Advisory Board Offshore Wind Energy MBA

- Member Board of Trustees German Offshore Wind Energy Foundation
- Member Advisory Board Federal Association of Wind Farms Offshore
- Member Board of Directors FGH (Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e. V.)
- Member Board of Trustees FGE (Forschungsgesellschaft Energie e. V.)
- Member of the German National Committee of CIGRE
- Member Board of Directors FfE (Forschungsstelle für Energiewirtschaft e.V.)
- Member Board of Directors of VBEW (Verband der Bayerischen Energie und Wasserwirtschaft)

* Tim Meyerjürgens is reappointed for a second term till 29 February 2028



Maarten Abbenhuis

Member Executive Board / Chief Operating Officer

50, Dutch (m)

Initial appointment:
1 January 2021

Expiry first term:
31 December 2024

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member Board Netbeheer Nederland

Other positions:

- Supervisory Board member of Royal Swinkels Family Brewers N.V.



Arina Freitag

Member Executive Board / Chief Financial Officer

53, German (f)

Initial appointment:
1 January 2022

Expiry first term:
31 December 2025

Other positions qualitate qua:

- Member Board TenneT TSO B.V.
- Member Board TenneT TSO GmbH
- Member of the Board of TenneT Offshore GmbH
- Member Supervisory Board of GreenneT
- Member Board Flexcess GmbH

Supervisory Board Report



The Supervisory Board (“SB”) looks back on a year of working intensively together with the Executive Board (“EB”) on the exploration and negotiation of the potential sale of TenneT’s German activities to the German state, known as project Ampere. While these negotiations and the preparations for this potential split continue, the SB is proud of TenneT’s achievements over 2023: good safety results, another 99.99993% for security of supply and a significant increase of grid investments compared to 2022. Another good step forward in the energy transition!

1. Supervisory Board reflections on 2023

Maintaining the balance between safety, security of supply and affordability of the electricity system is a huge task. The energy transition requires TenneT to implement innovative measures to increase its project delivery speed while also ensuring that work should be executed with everyone going home safely at the end of the day. At the same time, a scarcity of the materials and talent required to carry out TenneT’s tasks leads to pressure on the feasibility of timely delivery and to increasing cost levels within the entire supply chain. Standardisation and innovative measures have been developed to mitigate potential impact on security of supply caused by the infeed of more and more weather-dependent renewables. These dilemmas have been discussed in the SB in general as well as for specific investment proposals. The SB fully supports the mitigating measures taken. Amongst these measures are careful stakeholder management, different ways in recruiting talent and entering into long-term partnership contracts with TenneT’s suppliers to stimulate their expansion of capacity. These measures will contribute to acceleration of the projects that TenneT needs to realise because of its societal responsibility.

Measures to remain a customer of choice and an employer of choice and measures to relieve the congestion on the grid where possible (by advancing grid expansions, increase of congestion management and decrease/ postponing of capacity requests) have also been discussed regularly.

Project Ampere, the potential sale of TenneT Germany to the German state, has been an important topic for TenneT and thus for the SB. As the Transmission System Operator for the Netherlands, and a significant part of Germany, TenneT owns and operates over 25,000 kilometres of high-voltage lines and cables. The SB acknowledges the political reality that both the Dutch and German government prefer to fund, control and own their national electricity grid. Intensive dialogues took place with the EB on a possible full sale of TenneT’s German activities. The SB carefully assessed whether a sale would be in the best interest of TenneT Holding B.V., taking into account relevant boundary conditions and the interests of all stakeholders. Supported by an own external advisor, the SB discussed the EB’s assessment of the various scenarios and why the scenario of a full sale of TenneT Germany was tentatively identified by

the EB as the preferred scenario given the size of the investment agenda, financing needs and political realities. After the announcement of this preferred route on 10 February 2023, negotiations with the German state began and the SB remained informed and involved on a regular basis.

Project Tango, the preparation for a complete split in all leadership and organisational aspects if a transaction is concluded, has also been closely monitored by the SB and challenged where necessary.

Throughout the year, the topic of a potential (perceived) conflicts of interest of EB and SB members was carefully monitored throughout the process and addressed at the start of every meeting, thereby also looking beyond the transaction, as a transaction may have impact on future positions / personal career developments.

The SB highly appreciates the efforts of the EB and involved TenneT employees regarding both projects Ampere and Tango – which they did alongside safeguarding TenneT's core business: driving the energy transition.

2. Supervisory Board composition

In 2022, the SB decided to expand from five to six SB members because of the increased amount and complexity of the supervisory tasks.

The SB is very pleased that Edna Schöne, Essimari Kairisto and Stijn van Els were all reappointed for their second terms, from 1 May 2023 to 30 April 2027. The core competences of Edna Schöne, Essimari Kairisto and Stijn van Els pursuant to their international knowledge and various experiences and reference frameworks are noticeable in each committee meeting and SB meeting, leading to good countervailing power sparring opportunities for the EB. The SB agreed to a 'roof tile construction' where these three SB members will not all leave at the same time, to ensure continuity within the SB.

The second term of Laetitia Griffith ended on 30 June 2023. Laetitia has been reappointed until 31 March 2024 or until a good handover can be ensured. With the appointments of Maarten Camps and Kuldip Singh from 1 September 2023, this has been ensured. As a result, Laetitia Griffith agreed with the SB to step down as per 31 December 2023.

Maarten Camps has been appointed on the SB's so-called governmental profile and Kuldip Singh on the IT security and digitisation profile. Both SB members are complementary to the other SB members in terms of expertise, experience and competencies and fit well within the SB from a personality perspective. The SB welcomes Kuldip Singh and Maarten Camps wholeheartedly to the SB.

The SB thanks Laetitia Griffith for her greatly appreciated contribution to the RAC, which she has chaired, and her active and valuable participation in the SB on other matters, including her role as vice-chair (in which she was succeeded by Essimari Kairisto in 2024). The SB also appreciates Laetitia's commitment to the Works Council, as one of the two SB members appointed with an enhanced recommendation right by the Works Council. Kuldip Singh will succeed her in this role. Stijn van Els is the other SB member who holds this position.

2.1 Introduction programme

Maarten Camps and Kuldip Singh had an intensive, three day introductory programme on various TenneT locations. Focus points in these training sessions were safety, the various aspects of security of supply, affordability of the electricity system, feasibility of the investment portfolio, sustainability and CSRD reporting, political context of TenneT's activities and the projects Ampere and Tango. A working visit to the largest Dutch land station and offshore landing location in Wijk aan Zee as well as personal introductions to various Directors also formed an integral part of the programme.

2.2 Ancillary positions and potentially (perceived) conflicts of interest

Pursuant to the appointment of Kuldip Singh and Maarten Camps, the topic of SB ancillary positions in connection with potentially perceived conflicts of interest has been discussed. It was concluded that there are currently no potential conflicts of interest at hand. This is a topic that is carefully considered before each SB meeting by the company secretary and discussed at each SB meeting by the SB members themselves. Where necessary, potentially conflicted SB members are not granted access to the relevant documentation and the SB dialogue, which is minuted. An overview of the (ancillary) functions of the SB members is included in this Supervisory Board report.

2.3 Diversity

In 2023, the composition of the SB in terms of gender balance was three female and four male SB members, so 43/57%. As per 1 January 2024, when Laetitia Griffith's term will have expired, the female/ male ratio will be two female SB members against four male SB members so a ratio of 33/67%.

In terms of cultural background, the SB consisted of three members with a non-exclusively Dutch or German cultural background: Edna Schöne brings a Swedish cultural background, Essimari Kairisto a Finnish one and Kuldip Singh an Indian background. In addition, all SB members have working experience in both Germany and the Netherlands. Less visible, but as important, is a pluralism in of opinions - something the SB is proud of and cherishes.

3. Executive Board

3.1 Composition

With a CEO, CFO and two COOs, the EB was at full strength and speed throughout 2023 with a well-coordinated and collaborative team.

The SB is pleased with the reappointment of Tim Meyerjürgens as statutory director of TenneT Holding B.V. for a second term of four years from 29 February 2024 to 29 February 2028. Tim's knowledge, capabilities and his more than 25 years of experience at (the predecessors of) TenneT, both onshore and offshore, are highly appreciated, so is his dedication to a good safety performance culture. This also applies to the way Tim acts in the SB by contributing to the dialogue or by providing counterarguments where needed or useful.

The composition of the EB in terms of gender balance consists of two female and two male EB members, so 50/50%. The EB has two Dutch (CEO Manon van Beek and COO Maarten Abbenhuis) EB members and two German (CFO Arina Freitag and COO Tim Meyerjürgens).

Next to gender and nationality, the EB as a whole is diverse and complementary in terms of expertise, experience, competencies and personality. The SB is pleased to see that the EB really works together as a strong team.

3.2 EB performance

The Remuneration and Appointment Committee ("RAC") conducted the performance dialogues with the (i) the CEO on the functioning of the entire EB and (ii) with each of the four individual EB members.

The EB performance dialogues for 2022 were conducted in Q2 2023, thus also considering performance in the first half year of 2023. The performance dialogues were held against EB targets related to the corporate objectives for TenneT's four strategic pillars:

1. energise TenneT's people and organisation
2. secure of supply today and tomorrow;
3. drive the energy transition;
4. safeguard TenneT's financial health.

The performance on the targets was discussed in conjunction with mitigating measures where necessary. Individual performance and further leadership development were discussed with the EB members. The overall conclusion was that the EB functions very well together: it speaks with one voice; the tone is open and transparent, the EB visibly enjoys working together. Where needed, contradiction is shared constructively. In the way the EB acted the SB clearly saw that driving the energy transition is its guiding principle.

4. Set-up SB meetings

The SB conducted 16 extra SB meetings to discuss Ampere, alongside 12 regular SB meetings during which the topics Ampere and Tango were on the agenda. In total, the SB convened 28 times in 2023.

Each SB meeting was started by an 'SB-only' part in which the SB can speak and align on the most important agenda items without the EB and company secretary present. After the opening of meeting a compliance moment follows in which it is verified whether there are any topics on the agenda that may lead to potentially (perceived) conflicts of interest.

The SB has four committees that help guide SB decision-making: the Audit, risk and compliance committee, the Strategic investment committee, the Remuneration and appointment committee and the (temporary) SB Ampere committee. For each committee meeting, the documentation is shared with the entire SB. In each SB meeting the feedback of the prior committee meetings is shared by the chairs of the committees. After each SB meeting there is another possibility for the SB-only to reflect alone.

Most SB and committee meetings took place virtually, except for the SB meeting on 16 November and the SB and EB working visit to the city of Münster on 20 and 21 September 2023. The theme of the meeting was German-Dutch cooperation. The first part of the visit was to the Friedenssaal Münster's town hall, hosted by the mayor, followed by a tour and presentation of the German-Dutch military corps in Münster. Parallels and lessons learned between defence cooperation and cross-country collaboration in the energy transition were discussed. This offsite was also a good opportunity for the SB to connect on a personal level as well.

4.1 SB Ampere Committee

The SB established a separate (temporary) committee (the 'SB Ampere Committee') to prepare discussions in the full SB on the subject of a potential full sale of TenneT Germany to the German state. Ab van der Touw chairs this committee, Essimari Kairisto is a member. During the year 23 meetings of the SB Ampere committee took place. In addition, written updates were provided in weeks where there was nothing to discuss. Key items of these discussions were the status of the negotiations, the draft transaction term sheet and the cooperation agreement regarding offshore development.

4.2 Audit, risk and compliance committee

The audit, risk and compliance committee (ARCC) consists of Essimari Kairisto (chair), Ab van der Touw, Edna Schöne and – as from 1 September 2023 – Kuldip Singh as incoming member, succeeding Edna Schöne on 1 January 2024.

The ARCC discussed the quarterly results and the financial reporting (IAR 2022 and the Half-Year Results 2023) and the related documentation by the external auditor. The two half-yearly legal reports were also discussed. Further topics that the ARCC focused on in 2023 were: the follow-up of open IT audit findings, the functioning of the OneERP system, the preparation for CSRD reporting and the yearly alternating tax topic (this year: wage tax). These topics will also be closely monitored in 2024. The operation of the internal audit function was also evaluated.

The chair of the SB and the chair of the ARCC met with the Ministry of Finance in their yearly meeting to prepare for the General Shareholder Meeting.

The ARCC met five times in 2023 in the presence of the CEO and CFO, TenneT's Director audit, risk- and control and compliance and integrity ("ARC") and the external auditor Deloitte (the lead audit partner).

4.3 Strategic investment committee

The strategic investment committee (SIC) consists of Stijn van Els (chair), Essimari Kairisto, Edna Schöne and – per 1 September 2023 – Maarten Camps as incoming member, succeeding Essimari Kairisto on 1 January 2024.

The SIC discussed the quarterly reports on safety and investments. Further focus is on the Dutch Investment Plan (IP), the German Netzentwicklungsplan (NEP) and in relation thereto, the German TSO landscape.

TenneT's procurement strategy was discussed regularly in 2023 including the progress on the 2GW Program. The challenges of the energy transition were discussed in general on project, programme and portfolio level. Cost increases in the current suppliers markets versus regulatory developments were noted and monitored. The SIC explored – and appreciated TenneT's efforts to accelerate the energy transition and ensure its affordability by (i) creating synergies during execution of projects, (ii) applying innovative solutions where possible and (iii) being transparent on cost consequences and non-feasibility of certain execution methods desired by third parties.

The SIC prepared more than 80 investment proposals for SB approval. The SB approval threshold is EUR 50 million, leading to a high number of investment proposals needing SB approval. The SB ensures this is being carefully done, both for smaller - and for the large investments. Because TenneT's investment portfolio and project values have grown exponentially since these thresholds were set, the SB supports requesting the shareholder to raise these approval thresholds in 2024.

The November SIC meeting was attended by the lead audit partner from Deloitte to observe the controls exercised by the SIC: good controls were confirmed.

The SIC convened five times in 2023 in the presence of the COO's.

4.4 Remuneration and appointment committee

The remuneration and appointment committee (RAC) consists of Laetitia Griffith (chair), Ab van der Touw and Stijn van Els.

The RAC focused on the searches for, and the appointments of, the two new SB members, as well as on Tim's Meyerjürgens reappointment as EB member.

The RAC prepared for the SB the EB performance dialogues on the functioning of the EB as whole and the functioning and leadership development of the individual EB members, which were held with the RAC.

In the yearly management team review, the performance of the Senior Leadership Team members is discussed, as well as talent management and succession planning.

Laetitia Griffith handed over the chair of the RAC to Edna Schöne, who chairs the RAC from 1 January 2024.

The chair of the SB and the chair of the RAC met with the Ministry of Finance in their yearly meeting on the EB and SB functioning, EB and SB appointments and reappointments, EB and SB composition and the cooperation with the shareholder.

The RAC convened six times in 2023 in the presence of the CEO and the Director of the People business unit.

4.5 Dutch Works Council

The SB members with enhanced recommendation rights met with the Dutch Works Council four times. Topics discussed were amongst others Ampere, SB reappointments and SB searches, Tim Meyerjürgens' reappointment, the collective labour agreement negotiations and result, growth of the organisation and the workload within TenneT.

5. 2023 Audit by the external auditor

The 2023 audit that was conducted by the external auditor was discussed in the ARCC and in the SB. The main findings from the auditor Deloitte were related to TenneT's IT environment. Deloitte noted as one of the main issues the high number of IT audit findings. While many of these issues had been closed, the auditor also noted that new IT findings were identified – although these are partly related to a growing IT environment. Another topic discussed was the topic of 'useful life of assets': Deloitte's analysis on onshore assets in Germany and the Netherlands as well as for offshore assets in Germany was still in progress. Meanwhile, the analysis has been completed and has resulted in an extension of the useful lives of assets with the consequence of a lower depreciation as of 1 January 2024. Further details are explained in the financial statements.

The SB will keep closely monitoring the timely resolving of IT audit findings.

6. Integrated reporting and audit

The SB discussed the financial statements for the financial year 2022 as part of the Integrated Annual Report 2022. This dialogue was prepared by the ARCC, and the respective meeting was preceded by the regular meeting between the ARCC and external auditor without EB members nor the company secretary being present to ensure an open dialogue on matters related to the IAR.

As part of the annual, half-year and quarterly performance cycle, the SB reviewed the 2022 Integrated Annual Report, the Half-Year Report as well as the internal quarterly reports. Furthermore, it discussed the independent auditor's reports, results from internal risk and control assessments, the Integrated Performance Plan 2024-2026 and approved the 2024 budget and Financing Plan 2024.

In preparation for the upcoming Corporate Sustainability Reporting Directive, the EB and the SB discussed and approved the material impacts identified as an outcome of the so-called double materiality analysis (financial or impact materiality). The outcome of the double materiality analysis are the following material topics

1. Safe working environment
2. Security of supply
3. Financial health
4. Climate change
5. Resource use and circularity
6. Responsible Supply Chain Practices
7. Delivering the energy transition

TenneT is currently preparing to report in line with the European Sustainability Reporting Standards (ESRS) which will be applicable for TenneT in the financial year 2024.

7. Financial statements

In 2023, the SB examined the Integrated Annual Report 2022, the financial statements 2022, the Green Finance Report 2022, the independent auditor's report, the assurance report of the independent auditor related to non-financial information, the interim report/management letter and the audit results report issued by TenneT's external auditor. The ARCC prepared and advised on these documents. As a result, the SB endorsed the documents and recommended that the General Shareholder Meeting adopt the financial statements. The SB recommended the General Shareholder Meeting to discharge the EB members from liability for its management of the company in 2022 and release the SB from liability for its supervision over the year 2022, both of which took place.

8. Inclusion and Diversity

The SB approved TenneT's new policy that promotes inclusivity, diversity and equity (which means that people may need to be treated differently to provide an equality of opportunity).

Diversity means to include different perspectives, experiences, cultural backgrounds and characteristics among TenneT's employees to contribute to TenneT's results, for instance by challenging established ways of thinking and interacting with different perspectives. TenneT's targets for inclusion, diversity and equity will be reviewed on a quarterly basis and annually for the year ahead. Diversity has been discussed in the RAC and SB in relation to the management team review for all Directors and the leaders reporting to the Directors. Diversity has also been an important element in the search criteria for the two new SB members.

The RAC noted that both the target for female hires (30%) and the target for international inflow (10%) has been met.

The RAC and SB will keep monitoring diverse hiring as well as encouraging and living an inclusive culture. These targets have been monitored by the RAC and will keep continue to be so. The SB highly valued initiatives that provide a (temporary or permanent) workplace for refugee talent. The RAC also appreciated the way TenneT once again managed to attract and onboard 884 additional FTE in 2023.

The yearly meeting between the SB, EB and the Dutch Works Council about a healthy, engaged, growing and diverse workforce has been rescheduled to early 2024.

9. Strategy

TenneT's strategy in action is based upon its four strategic pillars of Energise our people and organisation, Secure supply today and tomorrow, Drive the energy transition and Safeguard TenneT's financial health. The SB was updated every quarter on TenneT's strategy in action in the quarterly integrated performance report. Progress on these four pillars is reported upon in the Integrated Annual Report.

Where in 2023 the strategic focus has been notably on project Ampere and the preparations for a potential split of the organisation in case of a transaction with the German state, the SB will remain actively involved in TenneT's strategy calibrations and in the re-evaluation that is planned for 2024.

10. SB Self-Evaluation

On 1 December 2023, the SB conducted its yearly self-evaluation – internally this time, because an externally guided self-evaluation took place in 2022. The evaluation of the SB work is overall very positive. This relates amongst others to the diverse composition of the SB, the constructive dialogue culture (no dominant speakers), the interactions with the EB and the efficiency of having a separate committee for Ampere. The SB workload was deemed very high. The SB wishes to strengthen the focus of the SB documentation and dialogues even further on critical topics and further empower the committees.

In 2024 TenneT will revisit the governance rules for its investment proposals so that less investment proposals will have to be approved by the SB (or the shareholder).

11. Updated Corporate Governance Code

Based on the updated Corporate Governance Code the rules governing the SB have been updated.

12. Permanent Education

The SB had in total four Permanent Education sessions in 2023 on the topics of energy system of the future (Target Grid) in connection to the implications of Esbjerg declaration, on safety, on security and on regulatory developments in the Netherlands, Germany and on a European level.

Appreciation

Finally, the SB would like to express its great appreciation for the way everyone at TenneT, along with all partners contributed to the impressive results over 2023 in a safe way: thank you very much!

Capabilities matrix Supervisory Board

Competencies	A.F. van der Touw (chair)	L.J. Griffith (vice-chair)	E.M. Kairisto	A.C.C. van Els	E. Schöne	K. Singh	M.R.P.M. Camps
General management	■	■	■	■	■	■	■
Financial management	●	●	■	●	●	■	●
Capital market/ investor relations	●	●	■	●	●	◆	●
Technology	■	◆	◆	■	◆	■	◆
IT	●	●	●	■	●	■	◆
Risk management	■	■	■	■	■	●	●
Project management (large infrastructure projects)	■	●	■	■	■	◆	◆
Human resources	■	■	■	■	■	●	■
Marketing/Public Affairs/ Brand image	■	■	●	■	■	■	●
Regulation	●	●	●	●	■	●	●
Public sector/State owned companies	■	●	●	●	■	●	■
Political/managerial experience and network the Netherlands	■	■	◆	●	◆	●	■
Political/managerial experience and network Germany	■	◆	■	■	■	●	■
International background/experience	■	●	■	■	●	■	■
Legal	●	■	●	●	■	◆	●
Experience in energy-, industrial and/ or financial sector	■	■	■	■	■	■	●
Knowledge of Dutch Corporate Governance Code	■	■	●	●	●	■	●
Corporate Social Responsibility/ Environmental, Social and Governance	■	■	■	■	■	■	●

■ = High ● = Medium ◆ = Low

Remuneration policy

TenneT's remuneration policy mainly aims to offer remuneration at a level that will attract and retain qualified and capable statutory directors (including those who come from within the organisation), being Executive Board members. This also applies to Supervisory Board members. The remuneration policy meets the best-practice provisions on remuneration as defined in the Dutch Corporate Governance Code 2022. Since all of the shares in TenneT Holding B.V. are held by the Dutch state, TenneT's remuneration policy falls within the scope of the 2022 State Participations Policy ('Nota Deelnemingenbeleid Rijksoverheid 2022', published 1 July 2022).

TenneT's remuneration policy has been approved by the Shareholder and is effective as of January 2020. It is also in line with the 2022 State Participations Policy. The most important elements of the remuneration policy are described below.

Employment market reference group

Remuneration for the statutory board members of TenneT has been set using a benchmark, a comparison with organisations competing in the same business and employment markets as TenneT. These organisations include:

- International transmission system operators (TSOs);
- Operators of infrastructure;
- Installation/engineering companies;
- Building companies;
- Financial institutions.

The outcome of this benchmark showed a higher remuneration level than TenneT's current level of remuneration, which has been set by the Shareholder in line with the remuneration policy as of January 2020 and the 2022 State Participations Policy and includes equal pay, regardless of gender or nationality.

The Supervisory Board reviews the remuneration policy for statutory board members once every four years and is planned for 2024. The Supervisory Board may resolve to do this as well in case of important policy changes, changes in Shareholder structure or ownership and changes in the labour market. Such changes will be aligned with and submitted to the Shareholder for approval.

Remuneration norm

The moment the Supervisory Board appoints a new statutory director it applies the remuneration policy as approved by the Shareholder. For 2023, this fixed remuneration is capped at the top as described above,

excluding pension and other allowances and was set at EUR 437,132 for TenneT's Chief Executive Officer (CEO). The fixed remuneration of the other Executive Board members (CFO and both COO's) has been capped at 90% of the remuneration of the CEO. The Supervisory Board applies the principle of equal pay to the remuneration policy for the statutory directors.

If, in the opinion of the Supervisory Board, the maximum remuneration as required by the Shareholder leads to unacceptable risks to the organisation because no suitable candidates can be found to fulfil the role of statutory director, the Supervisory Board shall consult the Shareholder.

The Supervisory Board decides on the annual increase in salary. If the remuneration of a statutory director has reached its maximum, further increases will be limited to the structural increments as agreed upon in the collective labour agreement which is applicable to all employees of TenneT TSO B.V. including Ms. Freitag and Mr. Meyerjürgens. Whilst being based in Germany, both have a Dutch labour agreement with TenneT.

Service agreement and compensation for early termination

In principle, with effect from 2017, employment contracts – with the exception of internal appointments – are concluded for a fixed term of four years. In the event that the employment contract is terminated prior to the expiry date, TenneT pays a maximum of one year's salary as a termination compensation, unless the statutory director resigns voluntarily or the termination is the result of his or her actions. As an exception to our policy, agreed with the Shareholder, Ms. Freitag will also receive this termination compensation if she will not be employed for a second term at the initiative of TenneT.

Pensions

The retirement age of statutory directors is based on the statutory pension age for Dutch contracts for statutory directors based in the Netherlands. The retirement age of statutory directors based in Germany is based on the statutory pension age as applicable in Germany. Statutory directors participate in the regular pension scheme of the country in which they are covered for social insurance.

The Netherlands based statutory directors participate in a pension arrangement as defined in the collective labour agreement and as applicable for all employees in the Netherlands. The employer and employee contribution for the statutory directors follow the same rules as applicable to all other employees. Dutch pension regulations define the pensionable salary up to the fiscal maximum of EUR 128,810 (gross pension, 2023).

The statutory directors based in the Netherlands receive the same compensation as TenneT employees with an income above the fiscal maximum pension salary. The compensation is based on the fiscally allowed age-dependent premium percentages up to fiscal maximum pension salary.

German based statutory directors participate in the regular pension scheme ('Beitragsplan') or any other pension scheme that such statutory director may have already been entitled to.

In Germany TenneT currently has two pension schemes. For employees starting after 1 April 2008 Pension scheme 2008 is applicable. Mr. Meyerjürgens joined TenneT's TSO GmbH predecessor E.ON Netz GmbH on 1 March 2003. At that time a company pension based on the pension scheme 2001 was provided to him. Mr. Meyerjürgens kept participating in his pension scheme. For Ms. Freitag the Pension scheme 2008 is applicable. Further reference is made to note 24 of the consolidated financial statements.

Other allowances and secondary benefits

The total remuneration package for statutory board members includes an allowance for necessary out-of-pocket expenses, the use of a lease car (of a type comparable to those provided to statutory board members of similar organisations) including possible private use, accident and directors' and officers' liability insurance, and thirty days paid leave per annum. Sign-on bonuses and recruitment incentive payments are not applicable for statutory board members.

Secondary benefits also include a nominal contribution towards health insurance premiums and the choice of other flexible individualised benefits, such as converting holiday allowance into extra leave hours. Most of these benefits are applicable to all TenneT employees, working under the Dutch collective labour agreement. The company does not extend any loans, loan guarantees or advances against future earnings to any statutory board members.

Taxes

TenneT and the Dutch Tax Authorities reached a tax settlement on the allocation of wage and income taxes to the Netherlands and Germany. TenneT shall fully indemnify, hold harmless and compensate statutory directors against all claims, demands, actions, suits, damages, liabilities, losses, settlements, judgments, costs and expenses (including but not limited to reasonable attorney's fees and costs), which arise out of or relate to any act or omission of TenneT in relation to the double taxation claim. As a result statutory board members will neither have any disadvantage of the international allocation of their remuneration, nor will there be a gain advantage from the advancing arrangement with TenneT, since it will be settled afterwards.

Three tax disclosures for former Board Members have been filed to the German Tax Authorities and have been settled in 2023.

In 2022, a Mutual Agreement Procedure was requested on behalf of Ms. Van Beek, Mr. Jager (as former statutory board members) and Mr. Voorhorst (as former statutory board members) between the competent Dutch and German authorities based on Article 25 of the bilateral tax treaty concluded between the Netherlands and Germany (2012) for the tax years 2018 and 2019. This request to remedy double taxation has been formally brought forward to the competent Dutch and German tax authorities and parties are awaiting a decision by the competent authorities.

(Re-)Appointment of Executive Board members and Supervisory Board members

TenneT naturally adheres to the (re)appointment process of both Executive Board and Supervisory Board members. Both Executive Board as well as Supervisory Board members are appointed for a term of four years and can be re-appointed for a second term of four years. In well-motivated cases, Executive Board and Supervisory Board members may subsequently be reappointed twice for a third respectively fourth term of two years. So the total maximum period for both Executive Board and Supervisory Board members is 12 years.

Board remuneration

This section specifies the current remuneration for statutory directors as well as members of the Supervisory Board.

During 2023, the Executive Board of TenneT was composed of the following statutory board members:

	Position	Date of first appointment	End of 1 st term	End of 2 nd term
M.J.J. van Beek	CEO	1 September 2018	31 August 2022	31 August 2026
A.C.H. Freitag	CFO	1 January 2022	31 December 2025	
M.C. Abbenhuis	COO	1 January 2021	31 December 2024	
T.C. Meyerjürgens ¹⁾	COO	1 March 2020	29 February 2024	29 February 2028

¹⁾ As of 1 March 2019, Mr. Meyerjürgens has been appointed as director; as of 1 March 2020, Mr. Meyerjürgens has been appointed as statutory director.

Ms. Van Beek and Ms. Freitag are employed by the company for the duration of a fixed-term. Mr. Abbenhuis and Mr. Meyerjürgens both have open-ended underlying employment contracts.

Remuneration of the statutory directors

Total remuneration

2023 (in EUR thousand)	Fixed remuneration	Gross Pension	Net pension	Total pension	Other allowance ¹⁾	Total remuneration
Current board members						
M.J.J. van Beek	437	25	45	70	33	540
A.C.H. Freitag	394	31	-	31	45	470
M.C. Abbenhuis	394	24	39	63	21	478
T.C. Meyerjürgens	394	110	-	110	35	539
Total remuneration current board members	1,619	190	84	274	134	2,027

¹⁾ The column 'Other allowance' includes certain perquisites provided to statutory directors in 2023, such as life-cycle allowance, an employer contribution to the Dutch statutory health insurance and an one-off payment as part of the Collective Labour Agreement. The costs shown in this column are excluding the annual employer contributions to the Dutch and German social security. For all EB members the 2023 employer social contributions amounted to EUR ten thousand.

2022 (in EUR thousand)	Fixed remuneration	Gross Pension	Net pension	Total pension	Other allowance ¹⁾	Total remuneration
Current board members						
M.J.J. van Beek	423	35	46	81	19	523
A.C.H. Freitag	367	90	-	90	49	506
M.C. Abbenhuis	381	31	29	60	25	466
T.C. Meyerjürgens	380	178	-	178	38	596
Total remuneration current board members	1,551	334	75	409	131	2,091
Former board members						
O. Jager ²⁾	-	-	-	-	15	15
Total	1,551	334	75	409	146	2,106

¹⁾ The column 'Other allowance' includes certain perquisites provided to statutory directors in 2022, such as life-cycle allowance, an employer contribution to the Dutch statutory health insurance and an one-off payment as part of the Collective Labour Agreement. The costs shown in this column are excluding the annual employer contributions to the Dutch and German social security. For Manon van Beek and Maarten Abbenhuis the 2022 employer social contributions amounted to EUR 9 thousand. For Arina Freitag the 2022 employer social security contributions amounted to EUR 10 thousand and for Tim Meyerjürgens to EUR 9 thousand.

²⁾ Consists of education costs.

Fixed remuneration

In accordance with the indexation for employees as determined by the Collective Labour Agreement for TenneT, the salaries of all statutory directors have been increased by EUR 270 gross per month and 6% as of September 2023, with the 6% also being applied to the EUR 270 gross per month, in line with the Collective Labour Agreement (hereafter: CLA). Furthermore, in light of the CLA, all statutory directors have received, like all employees of TenneT in the Netherlands and Germany, a one off compensation for the high inflation of EUR 1,000. The Supervisory Board sets and evaluates performance targets for each statutory director on an annual basis.

Pension cost

The pensions of all Dutch statutory board members are administered by the ABP Pension Fund. The pension accrual is based on an average pay system up to the fiscal maximum (gross pension). With respect to the fixed remuneration exceeding the fiscal maximum, the Dutch statutory board members may participate in a net pension system.

As explained in the remuneration policy the pension of the German statutory directors is based on actuarial calculations in line with IAS19. The amount is equal to the yearly service costs.

Other allowances and secondary benefits

All statutory directors have a company car available to them. The value of the private use is part of the Other allowances as shown in the table. The company does not reimburse its statutory directors for any personal income tax consequence resulting from the private use of leased cars.

For Dutch statutory directors the secondary benefits as shown in the remuneration table, include a contribution to health insurance and a budget for flexible terms of employment. Each statutory director received an allowance for necessary out-of-pocket expenses, of EUR 2,196 a year. This allowance is not included in the remuneration table as it is a compensation of expenses incurred and hence not considered a remuneration component.

The total remuneration paid to the statutory directors is reconciled to and further disclosed in [note 5 of the consolidated financial statements](#).

Remuneration ratio

The remuneration ratio CEO to employees is measured by comparing the total remuneration, including fixed salary, pension benefits and other allowances of the CEO with the median total remuneration, including fixed and variable variation, pension benefits and other allowances of all other employees. The remuneration ratio CEO to senior management is measured by comparing the total remuneration, including fixed salary, pension benefits and other allowances of the CEO with the median total remuneration, including fixed and variable variation, pension benefits and other allowances of the Senior Leadership Team (SLT). The SLT consists of 20 directors, all direct reports to the EB.

The remuneration ratio of the highest paid employee to employees is measured by comparing the annual total compensation, with the median of all other employees. As of this reporting year the remuneration CEO paid employee to average of all other employees is a new ratio calculation. Based on Dutch Corporate Governance Code 2022 it is also required to disclose current year's ratio and five previous years. That and the fact that the calculation base changed makes up for the fact that the remuneration ratio differ to what was reported in the IAR of 2018 and 2019. The cost components for these years have been reassessed.

Employees with a parttime employment contract are not recalculated to one fulltime equivalent. The same is applied to employees joining TenneT during the course of the year, their remuneration is not recalculated to twelve months.

	2023	2022	2021	2020	2019	2018
Remuneration ratio CEO to median of employees	5.6	5.9	5.8	6.2	4.7	7.0
Remuneration ratio CEO to average of employees	5.5	5.7	5.7	6.2	4.6	6.9
Remuneration ratio highest paid employee to median of employees ¹⁾	5.6	6.8	7.0	7.0	4.7	7.0
Remuneration ratio CEO to median of SLT	1.7	1.5	1.9	1.8	1.7	2.5

¹⁾ In the years 2018, 2019 and 2023 the CEO is the highest paid individual. Mr. Meyerjürgens is in the years 2020 till 2022 the highest paid individual, due to pension entitlements.

Remuneration of the Supervisory Board

The remuneration policy for the Supervisory Board defines the remuneration for the different roles and committees of the Supervisory Board. During 2023 each Supervisory Board member was serving on one, two or three of a total of four committees.

The roles and responsibilities of members of the Supervisory Board were as follows:

	Supervisory Board	Audit, Risk and Compliance Committee	Remuneration and Appointments Committee	Strategic Investments Committee	Ampere Committee ³⁾
A.F. van der Touw	Chair	Member	Member		Chair
L.J. Griffith ^{1) 2)}	Vice-chair		Chair		
E. Kairisto	Member	Chair		Member	Member
A.C.C. van Els	Member		Member	Chair	
K. Singh (as of 1 September 2023)	Member	Member			
M.R.P.M. Camps (as of 1 September 2023)	Member			Member	
E. Schöne	Member	Member		Member	

¹⁾ Mrs. Griffith is also member of the Aufsichtsrat of TenneT TSO GmbH.

²⁾ The appointment term of Laetitia Griffith lapsed per 31 December 2023. Mrs. Griffith handed over the Vice-Chair of the SB to Mrs E. Kairisto and the Chair of the RAC to Mrs. E. Schöne.

³⁾ Temporary committee to prepare decision making on the topics of Ampere and TenneT's disentanglement (project "Tango").

The Shareholder allows to an annual indexation of the Supervisory Board remuneration following TenneT's Collective Labour Agreement, from 1 January 2015 onwards. As a result, Supervisory Board member remuneration increased by EUR 270 gross per month and 6% as of September 2023, with the 6% also being applied

to the EUR 270 gross per month, in line with the Collective Labour Agreement. The committee remuneration increased by 6% as of September 2023.

Following this increase, Supervisory Board member remuneration was as follows:

(EUR)		
Chair	34,254	per annum
Vice-chair	27,789	per annum
Member	24,916	per annum
Audit, Risk and Compliance Committee	7,967	per annum
Remuneration and Appointment Committee	6,268	per annum
Strategic Investment Committee	6,268	per annum
Ampere Committee ¹⁾	6,268	per annum

¹⁾ Temporary committee to prepare decision making on the topics of Ampere and TenneT's disentanglement (project "Tango").

The total remuneration received by the Supervisory Board in their capacity as TenneT Holding B.V. Supervisory Board members during 2023 was as follows:

(in EUR thousand)	2023			2022		
	Fixed remuneration	Committee fee	Total	Fixed remuneration	Committee fee	Total
A.F. van der Touw	34	21	55	33	14	47
L.J. Griffith	28	6	34	26	6	32
E. Kairisto	25	21	46	23	14	37
A.C.C. van Els	25	13	38	23	13	36
E.M. Schöne	25	14	39	23	14	37
K. Singh	9	3	12	-	-	-
M.R.P.M. Camps	9	2	11	-	-	-
Total	155	80	235	128	61	189

The Supervisory Board



Ab van der Touw

Chair Supervisory Board

Chair SB Ampere Committee

Member Audit, Risk & Compliance Committee

Member Remuneration & Appointments Committee

68, Dutch (m)

- Chair Supervisory Board N.V. NIBA
- Member Board GAK Foundation
- (External) member Ondernemingskamer Gerechtshof 's Gravenhage
- Chair Advisory Council Ministry of Defence
- Chair Board Platform voor Techniek Talent
- Chair Supervisory Board Van Leeuwen Buizen Groep B.V.
- Chair Advisory Committee Nederlands Indië Monument
- Chair Supervisory Board Van Dorp installaties B.V.
- Chair Advisory Council Dutch Ministry of Infrastructure (til 1 January 2024)

Initial appointment:

1 June 2019

Expiry second term:

31 May 2026

Principal position:

- Former CEO Siemens Nederland (until 1 April 2018)

Other positions:

- Member Board Deutsch-Niederländische Handelskammer
- Chair Supervisory Board Universiteit Leiden
- Chair Fonds Slachtofferhulp



Laetitia Griffith

Vice-Chair Supervisory Board

Chair Remuneration & Appointment Committee

58, Dutch (f)

Initial appointment:

1 July 2015

Expiry last term:

31 December 2023

Principal position:

Former State Councillor in the Advisory Division of the Dutch Council of State

Other positions:

- Member of the Aufsichtsrat TenneT TSO GmbH
- Chair Supervisory Board Nederlands Filmfonds
- Member of the Supervisory Board of Gassan Diamonds B.V.

- Chair Board Stichting Nederlands Violconours
- Chair of the Supervisory Board of Save the Children the Netherlands
- Member of the Electoral Council
- Chair Supervisory Board Metropole Orkest
- Member of the Supervisory Board of the Kadaster
- Member of the Foundation Assurance KLM
- Member Supervisory Board Coca Cola Europacific Partners Nederland B.V.
- Member of the Board Koninklijke Verzamelingen



Edna Schöne

Member Supervisory Board

Member Strategic Investments Committee

Member Audit, Risk & Compliance Committee

52, German (f)

Other positions:

- Member of the Board 'Lateinamerikaverein'
- Member of the Executive Committee 'Ostausschuss der deutschen Wirtschaft'
- Member of the Executive Committee International Chamber of Commerce Germany
- Member of the Unternehmensbeirat KfW Ipex
- Member of the Board LAVFE-Foundation

Initial appointment:

1 May 2019

Expiry second term:

30 April 2027

Principal position:

- Member Executive Board Euler Hermes AG



Essimari Kairisto

Member Supervisory Board

Chair Audit, Risk & Compliance Committee

Member Strategic Investments Committee

Member Ampere Committee

57, German and Finnish (f)

Other positions:

Initial appointment:

1 May 2019

Expiry second term:

30 April 2027

Principal position:

- Former CFO Hochtief Solutions AG

- Member Supervisory Board Fortum Oyj
- Member Supervisory Board Applus+ Services SA
- Member Supervisory Board Freudenberg SE
- Chair 'Deutsch-Finnische-Gesellschaft e.V.'
- Member Supervisory Board Iveco Group N.V.
- Chair Board of Trustees Deutsch Finnische Gesellschaft
- Member Supervisory Board Fugro N.V.



Stijn van Els

Member Supervisory Board
Chair Strategic Investments Committee
Member Remuneration & Appointments Committee

59, Dutch (m)

Initial appointment:
1 May 2019

Expiry second term:
30 April 2027

Principal position:

- CEO of HyCC B.V. (the Hydrogen Chemistry Company)
- Former CEO Shell Germany

Other positions:

- Chair Supervisory Board IDA Foundation
- Chair Supervisory Board EVOS B.V.
- Member Advisory Council Dutch Ministry of Infrastructure



Kuldip Singh

Member of the Supervisory Board
Member of the Audit, Risk and Compliance Committee

50, Dutch

Initial appointment:
1 September 2023

Expiry first term:
31 August 2027

Principal position:

- Former Global Head Digital & Business Transformation Customer Solutions at E.ON Group

Other positions:

- Member of the Supervisory Board at KPMG
- Chair of the Supervisory Board at Whiffle
- Member of the Supervisory Board at ROM InWest, Chair of the Audit Committee
- Vice Chair of the Supervisory Board and Chair Remuneration Committee at Innosportlab Sport & Beweeg
- Chair of the Supervisory Board of Kyndryl Nederland B.V.
- Member of the Advisory Board Wickey Holding B.V.
- Lecturer at Governance University



Maarten Camps

Member of the Supervisory Board
Member of the Strategic Investment Committee

59, Dutch

Initial appointment:
1 September 2023

Expiry first term:
31 August 2027

Principal position:

- Chair UWV, Social Security and Public Employment Agency of the Netherlands

Other positions:

- Member of the Supervisory Board at the Reading and Writing Foundation
- Member of the Supervisory Board at the Jinc Continuity Foundation
- Member of the Supervisory Board of Jinc
- Member of the Advisory Board Stichting GAK



Corporate governance

As a transmission system operator, TenneT plays an important role in society. We believe in having a solid governance structure, effective oversight and a transparent accountability to all stakeholders. To that end, we comply with the Dutch Corporate Governance Code (hereafter: the Code), insofar as it is applicable.

Corporate governance structure

TenneT's corporate governance structure comprises the Executive Board, the Supervisory Board and the General Meeting of Shareholders. Additionally, our internal Audit, Risk & Internal Control and Compliance & Integrity unit and external auditor play an important role in this structure.

Executive Board

The Executive Board of TenneT Holding B.V. has four statutory directors. The Executive Board members have joint authority to represent the company. Each board member also holds limited individual power of attorney. Three members of the Executive Board of TenneT Holding B.V. are managing directors of TenneT TSO B.V., three members of the Executive Board are managing directors of TenneT TSO GmbH, and one of these three members is managing director of TenneT Offshore GmbH. One member of the Executive Board is chair of the Aufsichtsrat of TenneT TSO GmbH.

The Executive Board is responsible for sustainable long-term value creation by the company, which includes regulated and non-regulated activities.

Supervisory Board

The Supervisory Board of TenneT Holding B.V. supervises the policies, management and the general affairs. It carries out its duties in the interests of the company and its stakeholders, and takes into account the effectiveness of the company's internal risk management and control systems and the integrity and quality of the financial and sustainability reporting. Supervisory Board decision-making is supported by the Strategic Investment Committee, the Audit, Risk and Compliance Committee and the Remuneration and Appointments Committee. In 2023, a temporary Ampere Committee was established to prepare decision making on the topics of a potential split (project Ampere) and TenneT's disentanglement (project Tango). TenneT has a two-tier board structure, as specified in the Electricity Act.

All information about the Supervisory Board (such as its rules and rotation schedule) is available on our [corporate website](#).

General Meeting of Shareholders

All shares in TenneT's capital are held by the Dutch state, which is represented by the Ministry of Finance. Under the Electricity Act, only the Dutch state may hold voting interests in the company. A General Meeting of Shareholders is held within six months after the end of each financial year. The General Meeting of Shareholders discharged the Executive Board and Supervisory Board members from liability from their respective activities in the year 2023. Other shareholder meetings are held as and when deemed necessary by the Executive Board, Supervisory Board or the Shareholder.

Audit, Risk & Internal Control and Compliance & Integrity

The Audit, Risk & Internal Control and Compliance & Integrity (ARC) unit brings together the teams of Internal Audit, Risk & Internal Control and Compliance & Integrity. The integrated team provides benefits in terms of a single point of contact and opportunity for more alignment and synergy. The resulting limitations to the independence of the Internal Audit team are managed through the outsourcing of periodic audits on the Risk & Internal Control and Compliance & Integrity teams to a third party. The ARC unit provides an integrated report on a quarterly basis towards the Executive Board and the Audit, Risk & Compliance Committee, who advises the Supervisory Board.

The ARC unit is led by the Director ARC, who reports hierarchically to the CFO. The management of Risk & Internal Control and management of Compliance & Integrity report to the Director ARC, who also manages Internal Audit. Both the Director ARC and the Head Compliance & Integrity have a second dotted reporting line to the CEO.

In line with the good governance practice of the three lines model by the Institute of Internal Auditors, the management of the organisation is responsible for directing and leading activities to achieve the objectives of the organisation. It establishes and maintains appropriate structures and processes for the management of activities, including governance, risk management and internal control. The teams Risk & Internal Control and Compliance & Integrity train, advise and support the organisation in their field of expertise. The team of Risk & Internal Control facilitates the company-level management systems for risks and internal controls. The Compliance & Integrity team facilitates the company-level management systems for prevention,

detection and responding to risks related to Compliance & Integrity, including data privacy. Compliance & Integrity has representatives in both the Netherlands and Germany.

Outside the ARC unit, teams have been established to train, advise and support the organisation in the fields of health, safety and environment, information security and quality management (in line with NTA8120, ISO55001 and ISO9001).

The team of Internal Audit provides independent assurance and advice services regarding the adequacy of governance, risk management and control arrangements across the company. Internal Audit drafts an audit plan after consultation with the Executive Board, the Audit, Risk & Compliance Committee and the external auditor. The internal audit plan is submitted to the Executive Board, and then to the Supervisory Board, for approval. The functioning of Internal Audit is annually assessed by the Executive Board after consultation with the Audit, Risk & Compliance Committee. The performance of the internal audit function is assessed at least every five years by an independent third party. The latest independent assessment was performed in December 2021.

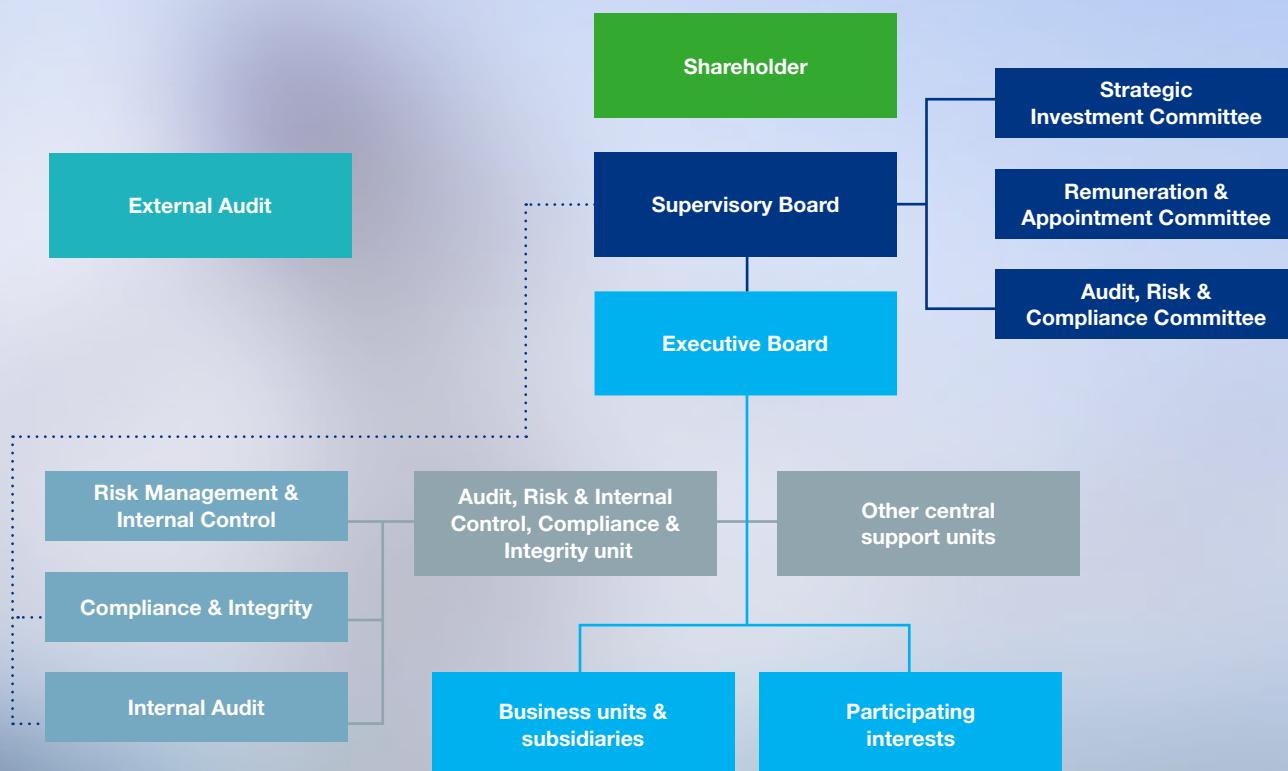
External auditor

The General Meeting of Shareholders has the power to appoint external auditors to audit the financial statements prepared by the Executive Board. These auditors report to the Supervisory Board and the Executive Board, and their findings are presented in an independent auditor's report, an assurance report, a management letter and an audit review results report. The General Meeting of Shareholders appointed Deloitte Accountants B.V. as TenneT's external auditor as per 1 January 2020. In 2022, the Executive Board, Supervisory Board, shareholder and Deloitte have agreed to prolong the contract of Deloitte for another two year period in accordance with the prolongation options in the contract. The prolongation is for the financial reporting periods 2024 and 2025.

The functioning of the external auditor is supervised by the Supervisory Board, advised by the Audit, Risk & Compliance Committee, considering observations of the Executive Board.

The external auditor attends all meetings of the Audit, Risk & Compliance Committee, including the meeting at which the independent auditor's report on the financial statements is discussed. If required, the external auditor also attends

Corporate governance structure



the relevant Supervisory Board meeting. In line with previous year the external auditor attended one meeting of the Strategic Investments Committee for information purposes.

Deviations from the Dutch Corporate Governance Code

Certain principles and best-practice provisions in the Code do not apply to TenneT. The reasons why and to what extent TenneT decided not to or could not adopt these particular principles and best-practice provisions are explained below:

Chapter 2:

2.1.3: Not applicable: no Executive Committee has been established at TenneT.

2.3.2: If the Supervisory Board has more than four members, the Code stipulates that the board shall appoint from among its members an Audit Committee, a Remuneration Committee, and a Selection and Appointments Committee. The TenneT Supervisory Board has combined the tasks of the latter two committees into a Remuneration and Appointments Committee.

2.3.8: Not applicable: no delegated Supervisory Board member is employed by TenneT.

2.7.5, 2.8.1 – 2.8.3: Not applicable: these provisions do not apply to TenneT because it only has one shareholder, being the Dutch state.

Chapter 3:

3.1.3: Not applicable: no Executive Committee has been established at TenneT.

3.3.2, 3.3.3: Not applicable: these provisions do not apply to TenneT because it only has one shareholder, being the Dutch state.

Chapter 4:

Regarding paragraphs 4.1 and 4.4 TenneT complies with the Code. Paragraphs 4.2, 4.3 and 4.5 are not applicable to TenneT because it only has one shareholder, namely the Dutch state.

Chapter 5:

Given TenneT's two-tier board structure, this chapter is not applicable.

Compliance and Integrity

A culture of Compliance and Integrity is essential for TenneT's sustainable success. Therefore, we strive to prevent and - at an early stage - identify and respond to compliance and integrity risks that could jeopardise the implementation of the company's strategy and objectives and lead to economic and/or legal consequences, as well as reputational damage.

Especially in view of the high annual investment volume, we consider the compliance risk increasing. The Compliance and Integrity Team (ARC-COI) is part of the ARC Unit (Audit, Risk & Compliance Unit). The Director of the ARC Unit reports to the CFO.

Our Code of Conduct with our Guiding Principles 'Ownership', 'Connection', and 'Courage', and a number of compliance directives guide our employees to conduct business ethically and to comply with the applicable laws and regulations. Each quarter all TenneT employees are requested to follow an e-learning on a certain Code of Conduct topic. These topics cover items regarding compliance, privacy, safety and security.

Moreover, since 2023 all German TenneT employees are requested to follow an e-learning on the German Supply Chain Act. All new employees participate in compliance trainings as part of their onboarding program. Thereafter, they are requested to also follow the afore mentioned e-learning.

Data privacy

In the course of its business activities, TenneT regularly processes personal data. We use standardised processes to assess risks and protect the rights of data subjects. Compliance with external laws and regulations, as well as internal rules is ensured by the responsible specialist departments, which receive advice from the data protection team. Moreover, in each unit a Privacy Champion is the main point of contact for privacy matters. This liaison

between the Privacy Champions and the Privacy team furthers two-way communication and to-the-point privacy advice by the Privacy team.

TenneT regularly reviews its processes for processing personal data and trains its employees to meet data protection requirements. External service providers are requested to sign data protection agreements.

The independent function of the data protection officers is guaranteed within the ARC Unit.

Advice & reporting

ARC-COI advises the business on various compliance, integrity and data protection aspects and regularly reports to the TenneT Executive Board and the Audit, Risk and Compliance Committee of the Supervisory Board regarding such topics.

Various channels exist through which (potential) Code of Conduct violations, including compliance and data protection issues, can be reported. Moreover, a Speak up portal, which is operated by an external party, allows for (potential) Code of Conduct violations to be reported (anonymously).

Identified compliance risks are dealt with by the Compliance and Integrity Committee in its quarterly meetings. In 2023, no compliance incidents with a material impact were identified for TenneT. Material impact is defined in our risk matrix as a breach that has a significant adverse effect on TenneT's reputation and/or financial position.

Corporate risk management and Internal control

Professional corporate risk management with integrated internal control processes are key throughout the organisation and result into effective risk-based decisions.

Corporate risk management and internal control framework

Risk Management continuously identifies risks, assesses severity of risks, prioritises risks, implements risk responses and maintains a portfolio view. It reports the identified uncertainties, opportunities or control issues proactively on a quarterly basis towards the Executive Board, Supervisory Board and Senior Leaders. The principles of corporate risk management and internal control should be taken into account in all activities performed at and for TenneT.

Corporate risk management facilitates top-down and bottom-up dialogues, workshops, detailed analyses and general trainings on risk awareness at all levels within TenneT. The resulting outcome provides management insights to take risk-based decisions that support the achievement of objectives set at all organisational levels.

As corporate risk management the focus and key objectives are to:

- Identify events, assess the risk, formulate risk responses, inform and communicate, implement control activities and continuous monitoring;
- Establish and maintain a uniform risk management framework;

- Provide the required tools, framework and guidelines for risk based decision making;
- Transparent and uniform reporting based on the ISO and COSO framework.

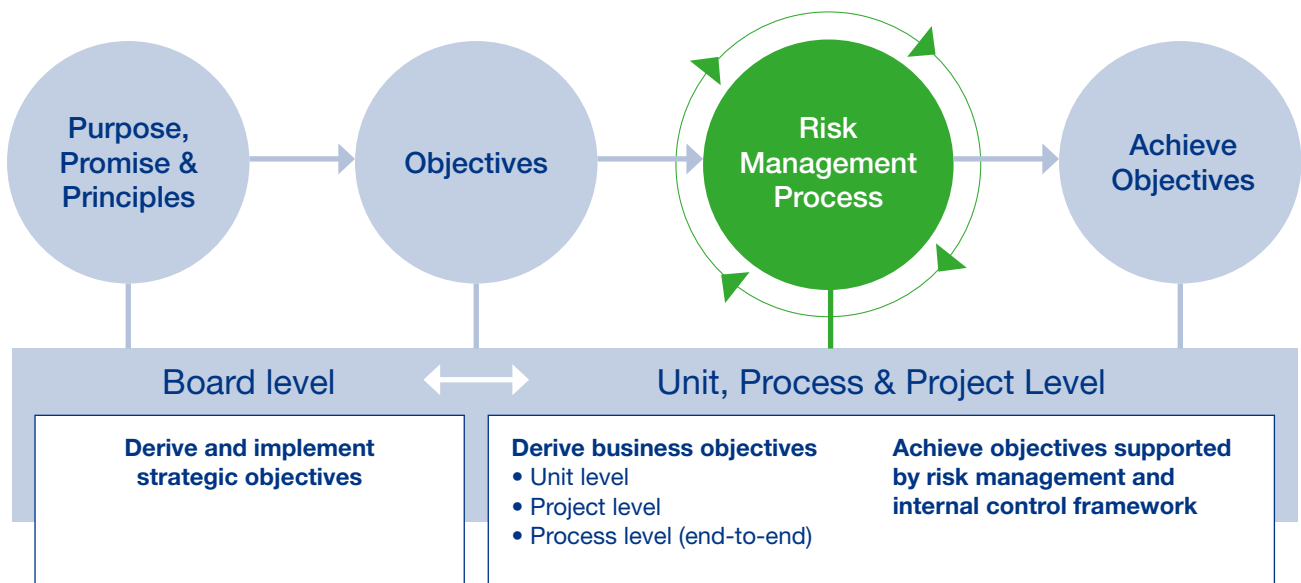
As TenneT the corporate risk framework is structured into:

- Strategic Risk Management (SRM);
- Operational Risk Management (ORM);
- Project Risk Management (PRM);
- Risk and Portfolio management;
- Internal Control and Process Risk Management.

TenneT's corporate risk management and internal control frameworks are based on ISO 31000 and COSO standards and are compliant with the requirements of applicable laws and regulations such as the Dutch Corporate Governance Code, the German Control and Transparency in Business Act and the German Accounting Law Reform Act.

During 2023, we have further developed our risk management and internal control system by the implementation of a corporate risk catalogue, developing an early risk detection system, the execution of process risk assessments and the integration of the application controls of our new ERP system into our internal control system.

Unit, Process & Project Level



Risk appetite

The amount of risk TenneT is willing to seek or accept in pursuit of its long-term objectives.

The Risk Appetite Statement 2023 sets the guidance and willingness for the activities conducted by TenneT in pursuit of its strategic objectives. The Executive Board together with the Senior Leadership Team reviews the Risk Appetite Statement annually to ensure that TenneT maintains a balance between risk and reward, relative to potential opportunities. In terms of the amount of risk that TenneT is willing to seek or accept, a differentiation is made between low risk appetite to high risk appetite.

High Risk Appetite:

Areas in which TenneT has a preference for disciplined risk-taking because we have determined that the potential upside benefits outweigh the potential disadvantages.

Medium Risk Appetite:

Areas in which TenneT must constantly strike a balance between potential upside benefits and potential downside aspects of a given decision.

Low Risk Appetite:

Areas in which TenneT avoids risks, or acts to minimise or eliminate the likelihood that the risk will occur, because we have determined that the potential downside aspects are intolerable. These are areas in which we typically seek to maintain a very strong control environment.

In the sections below we depict the results which places each risk area on a risk-appetite scale that ranges from 'low' to 'medium' to 'high':

Risk appetite

Risk area

Description

Rationale

High Risk Appetite

Secure Supply Tomorrow



Planning and building a future-proof energy system today that provides security of supply tomorrow (e.g. Target Grid, 2GW Program, Sued(Ost)Link, hydrogen solution) while supporting a reduction in CO₂ and SF₆ emissions.

We want to stimulate the market by entering into innovative partnerships and will apply cutting-edge technology to develop adequate responses to some of the most vexing challenges of the energy transition, as well as the Climate Agreement. We accept that some approaches could fail to fulfil on their promise.

Risk area	Description	Rationale
Medium Risk Appetite		
Asset Security 	To ensure that demand and supply of electricity - from renewable and traditional sources - are balanced.	We continue to ensure the security of supply of electricity transport, and connection of new customers, always considering the limited availability of interconnected electricity in Europe, congestion management or the planning complexity of dispatching.
Supply Chain Management 	To have all required materials, supplies and services available on time and in asked quality. Or new suppliers of other countries.	We will make reasonable efforts to invest in supplier relationships and to secure critical supplies and services on time and in agreed quality for large projects while balancing supply chain constraints due to overall tight market conditions.
Recruitment and Retainment 	To be able to accommodate up to 10,000 internal and external employees to achieve our future projects.	We will continually assess best practices in the industry for attracting, retaining and developing talent, including seeking flexibilities for hiring and compensating staff, while recognising that growing too rapidly could inhibit the organisations agility and responsiveness.
Safeguard our financial health 	To maintain our credit rating and have a sustainable balance between equity and debt.	We use a variety of processes and controls to continuously monitor and manage project capital expenditures, reporting, and the delivery of ancillary services, recognising that raising more debt is a quick way to finance our large projects. But it can negatively impact our credit ratings. We address OPEX growth before it leads to inefficiencies.
IT Infrastructure 	Events or circumstances that could potentially improve or compromise the processing, stability, capacity, performance or resilience.	We will act to minimise any weaknesses that could disrupt business operations, affect productivity, heighten the risk of fraud or threaten the security of information. We will work to avoid unplanned downtime that could result in lost productivity or costs to recover data. It excludes critical operational systems.
Low Risk Appetite		
Ethics, Compliance & Human Rights 	Working with business partners who do not share the same ethics and compliance principles or are situated in countries with lower human right standards.	We adopt a cautious stance for compliance by promoting and enforcing compliance with all laws, procedures and internal standards. At times we assume a degree of calculated risk of working with contractors and subcontractors in countries with lower human right standards that are essential to support our large projects.
Social responsibility 	Protecting above the legally and regulatory required the values of our own workforce, workers in the value chain, and communities.	We take our responsibility to fulfil our civic duty and impact on society seriously, including the health and well-being of all who are affected by our task and to benefit communities or society as a whole by balancing societal requirements and our economical growth.
Operational Safety 	To develop, promote and apply asset integrity and safety standards while increasing our asset capacity and efficiency.	We recognise that for operational safety our assets must not only be safely designed, tested, and built, but also safely maintained, operated and replaced by trained operators and service technicians. We endeavour to identify asset safety issues, define action plans to reduce risks, monitor its progress and to provide implementation support. We act on the basis of the highest safety standards in our sector.
Asset Security 	Ensuring the protection of our assets against physical threats, such as attacks on sub-sea cables, onshore connections, substations, pylons or theft of valuable materials.	We continually assess best practices to control the risk of protecting our assets from theft and intruders while recognising that a 100% protection is not possible.
Cyber Security 	Resilience against cyber threats or malware infestations affecting loss of control or power outages.	We have adopted a cautious approach to cyber risk. We reduce risk as much as possible by proactively and continuously mitigating malware and other intrusions, preventing unauthorised disclosure of sensitive data, and mitigating vulnerabilities in our security protocols.

Key risks and opportunities

To provide a single structured risk overview of all the risks and opportunities identified by TenneT, three risk tables have been introduced. A strategic risk table based on the four strategic pillars another on regulatory risks and lastly climate-related risks. Please note that the risks mentioned in these tables are also presented earlier in the section 'Our Performance'.

Strategic related risks and opportunities



Energise our people and organisation

Risks

- A tight candidate-driven market where TenneT competes with other TSOs, engineering firms, subcontractors, equipment manufacturers, consultants and a host of other specialists.
- Negotiations over the possible sale of TenneT's German operation to the German state could be a distraction for our people in both countries.
- Maintaining a net inflow of FTEs becomes more challenging since external contract workers left TenneT due to legislative restrictions on interim contracts.
- A notable rise in absenteeism due to mental health issues.
- As the scale and speed of our work increases, we are exposed to more safety risks.

Mitigating measures

- Introduction of a new and revised structure of our Health Safety and Environment (HSE) organisation.
- Using a competency-based approach, meaning hiring people for their individual talent, interests and skills rather than solely for their experience.
- Embedding our safety requirement into our contracts, with follow-up meetings to ensure compliance.
- Company-wide-standardisation, ensuring everyone working for TenneT, including our subcontractors speak, follow and work using the same safety protocols.
- Closer collaboration with hiring managers to speed up the recruitment process and attract the right candidates

Opportunities

- Structural shift towards hybrid working leads to new possibilities and addressing the shifting expectations of jobseekers. It better support our employees wellbeing, psychological safety and motivation.
- Boosting our execution power by finding better ways of working together in a performance-oriented culture.



Secure supply today and tomorrow

Risks

- The demand for clean, renewable sourced electricity is so high that TenneT cannot always provide sufficient capacity.
- The scale and speed of electrification cannot immediately be accommodated by the existing network. This causes a shortfall in available transmission capacity and grid congestion in specific areas.
- The nitrogen impasse in the Netherlands can lead to some major delays in projects to expand the electricity grid.
- Market risk has further increased due to a sellers dominated market.
- Demand and electricity load on our network continues to grow, reducing the possibility for outage windows and opportunities for maintenance.
- Our older assets require more maintenance work and present a growing logistical challenge and cost.
- Cyber-attack / malicious attack on IT systems
- A major delay of large projects' delivery due to amongst others delayed permitting procedures, scope changes, sourcing issues can lead to additional project costs, penalty payments, redispatch costs or reputational damage.
- The potential usage of new technologies in our assets could cause unforeseen malfunctions and could require more focus on maintenance.
- Suppliers are unable to deliver critical supplies (e.g. DC cables) or services to schedule (or at all) or in agreed quality as they experience capacity constraints.
- Protection of our assets against physical threats, such as attacks on sub-sea cables, onshore connections, substations, pylons or theft of valuable materials (e.g. copper)

Mitigating measures

- To increase the capacity of the grid in congestion areas, we are investing several billions over the next 10 years, in our onshore grid in the Netherlands.
- We took widespread measures to relieve grid congestion in the Netherlands, including a congestion management study together with regional electricity system operators.
- ACM allowed system operators to prioritise projects that solve or limit congestion in the grid, thereby deviating from the first-come-first-served principle.
- We introduced a new Outage Window Optimisation Project, designed to increase outage capabilities in the network, without sacrificing the pace of our work.
- Standardisation of equipment and assets is helping to accelerate the speed and efficiency of maintenance.
- Continuation of effective monitoring and action-taking against physical or cyber security attacks, together with our strategic partners.
- Diversification of suppliers and measures on pricing, supplier relationships and warehousing.
- Development and adaptation of sourcing strategies and investment into long-term agreements with volume commitments.

Opportunities

- Our Target Grid 2045 strategy, with the objective of having a future-proof electricity grid in place by 2045. This will be capable of supporting a sustainable economy, with a reliable and secure supply of green electricity for all users, from consumers to industry.
- Growing political support to reduce permitting time.
- Circularity of resources becomes more viable to reduce our footprint on for instance the usage of virgin copper.



Drive the energy transition

Risks

- Accidental release of Sulphur hexafluoride (SF₆), used as a highly effective insulator and extinguisher in switching installations, is extremely damaging for the environment.
- Market availability is tight, with limited options available that can substitute the properties of SF₆ at the extra-high-voltage level.
- Grid losses could increase in coming years as we transport more electricity and over longer distances.
- From a regulatory perspective, TenneT is not reimbursed for the costs related to greening our grid losses in Germany. With high prices for guarantees of origin, this affects our ability to green as much of our grid losses.
- An ageing grid could lead to a higher risk of more oil leakages and environmental incidents.

Mitigating measures

- Firm emission reduction goals for 2030.
- Progress continues in devising a new circularity strategy and increasingly implementing circularity requirements in our tenders and our procurement strategies.
- Life Cycle Assessments (LCAs) to provide answers to questions over the provenance of materials, where the biggest CO₂ bottlenecks are along a supply chain, and how we can work with suppliers to reduce them.
- Environmental Cost Indicator (ECI) to incentivise our suppliers to reduce the environmental impact of the products and services we buy from them.
- To improve the environmental impact of our usage of materials, we are increasingly implementing circularity requirements in our tenders and our procurement strategies.

Opportunities

- New technologies and European collaboration to foster for instance cross-border solutions, multi-hubs and sector coupling.
- We are investigating how copper from TenneT transformers could be used to create new ones.
- Sustainability criteria can also stimulate innovation.



Safeguard our financial health

Risks

- The total financing requirement (debt and equity) is increasing because of growth of our CAPEX programme in the Netherlands and Germany.
- Misalignment between the strategic view of TenneT and the regulatory framework resulting in the situation that not all our long-term investment costs and our operational costs might be covered by regulatory reimbursements.
- The rising OPEX costs incurred might not be in sync with the allowed OPEX revenues.
- The costs for ancillary services remain at a high level, because of high congestion management costs following the Russia-Ukraine war.
- Exposure to credit risks or write-offs if one or more of our partners get into financial difficulties.
- Incorrect application of (new) laws and regulations could lead to potential errors in our financial or non-financial reporting.

Mitigating measures

- Implementing a regulatory framework to support our strategy and by delivering a return in line with what our capital providers expect.
- Active cost control to strive for an efficient operation to lower OPEX expenditure as far as reasonably possible.
- Raise required external financing.
- TenneT as a company is not seeking short-term profits. We invest for periods of 20 to 40 years or more.
- Stress testing of hypothetical worst-case scenarios and to address any potential high risk following from the analysis.
- Implementation and control effectiveness check of our internal controls for the financial / non-financial reporting processes.
- Support by external consultants/specialists on CSRD topics and implementation.

Opportunities

- Investments in green businesses and economies are increasingly favoured by large investors and banks (e.g. institutional).

Regulatory risks

Regulatory risk

Risk-mitigating actions

General



- The grid fees have increased significantly in the current years (mainly due to high energy prices) and will further increase because of the investments needed to facilitate the energy transition.
- Inability to meet increasing efficiency targets over time as imposed by incentive regulation, especially considering a strongly growing company and the need for significant investments in grid expansion, maintenance, operation as well as innovation.
- Undercoverage of the regulatory CAPEX remuneration driven by a non-reasonable return on invested capital and an increasing investment portfolio which could lead to more difficulties in financing and raising sufficient funding.
- Non-compliance with the current regulatory framework. New regulatory and legal obligations have to be implemented. The flow of information on new regulatory and legal requirements must be ensured.

- TenneT aims to address the affordability issue by 1) being transparent on the financial implications of the current plans to the relevant stakeholders, 2) ensuring efficient roll-out strategies of assets (i.e. 2 GW offshore program, hybrid assets) and 3) working on efficient ancillary services markets.
- TenneT performs regular reviews of its processes and organisational structure, introduced lean management and carries out continuous improvement activities. TenneT also prepares make-or-buy decisions in its investment process to optimise value for money to society and conducts strategic dialogues with regulators (ACM, BNetzA, ACER), policymakers and industry partners/suppliers to co-shape its future regulatory framework.
- TenneT's strategy is to seek mutually acceptable results with the regulator and further stakeholders. However, if needed to protect pivotal strategic positions on solid legal grounds, legal action may be taken.
- Onboarding of new employees on relevant topics.

Europe



- The 'Clean Energy Package' (CEP) entered into force. It requires amongst others that TSOs provide 70% of the total cross-border transmission capacity to the market, an amount difficult to achieve without extensive and costly redispatch activities. The German government introduced an action plan to gradually achieve this target by 31 December 2025. Delays in fulfilment of this plan by TenneT could lead to material financial penalties. Similarly, the Dutch Ministry of Economic Affairs & Climate Policy has issued an action plan to gradually achieve the 70% target by 1 January 2026, which also contains derogations for TenneT.

- In Germany TenneT keeps the capacity requirements along the 'trajectory' as defined in the national 'action plan'. This means stepping up to full 70% using instruments such as coordinated redispatch and countertrade.
- In the Netherlands, TenneT monitors compliance against the action plan, with regard to the conditions of the derogation. TenneT reports on issues to the ACM and the Ministry of Economic Affairs & Climate Policy, if any.

The Netherlands



- ACM has performed a consultation for the new Regulatory Period starting in 2027. ACM intends to revise the regulatory method to better account for the implications of the energy transition. The efficiency assessment and future estimations of the OPEX development remain challenging topics.
- Increasing congestion in the TenneT grid puts pressure on TenneT to open up any remaining grid capacity and propose regulatory changes if needed.

- TenneT appreciates the open vision ACM has taken towards the new regulatory period and will support the process by preparing consultation responses that include implementable regulatory improvements to the current challenges. In the consultation process TenneT will address its main concerns with the current method being: 1) Regulation of Operational & IT Expenditure 2) The use of the international TSO benchmark which does not provide sufficiently robust efficiency incentives 3) Regulation of innovations.
- TenneT asserted a pro-active role within the national action plan on grid congestion and develops new options in cooperation with stakeholders. Early results are a proposed implementation of time-of-use tariffs and time dependent transmission rights.

Germany



- Due to the rise of the financing costs on the capital markets since 2022, the BNetzA intends to increase the return on equity (RoE) in the 4th regulatory period compared to the initial determination of 5.07% (before corporate tax). However, adjustments are only planned for a minor part of TenneT's investments. The RoE of 5.07% will be applied to the remaining investments. The reduction compared to a RoE of 6.91% in the 3rd regulatory period will have a significant negative impact on TenneT's cash flow and revenues.
- Following the European Court of Justice decision on the independence of the BNetzA, the energy industry law was changed in 2023 to give more decision-making power to the BNetzA. The previously relevant legal ordinances, will remain in force for a transitional period until the end of 2028. However, the BNetzA can already deviate from these. Furthermore, BNetzA announced a broad consultation on changes of the regulatory framework.

- TenneT challenges the concept of the BNetzA and will examine legal steps to achieve an adjustment of the RoE for all investments in the 4th regulatory period. TenneT established an internal working group including colleagues from its regulatory, legal and political departments to accompany the political process. Amongst others, TenneT engages in the German Association of Energy and Water Industry (BDEW) to support profound analysis and advocacy work within the network industry.
- TenneT actively participates in public and expert discussions and positions itself as a competent partner and trustful advisor to the regulators and policymakers.

Climate-related risks and opportunities

The Taskforce for Climate-Related Financial Disclosures provides recommendations for companies to improve and increase the reporting of climate-related financial information. We have followed up on its recommendations, including including climate-related topics in our risk

assessment process, and have identified the following climate related risks and opportunities for TenneT, which we clustered below. Please note that there might be some overlap with risks also being mentioned earlier in the report, but this is to provide one structured overview in this section.

Climate related risks

Risks	How might this affect TenneT?	Risk mitigating actions
<ul style="list-style-type: none"> • Transition risks • Policy and legal risks  	<ul style="list-style-type: none"> • Policy and legal risks are related to our regulatory framework. Choices we make that can help society and us as a company to transition to a climate-neutral economy are subject to discussion with our regulator. Our regulatory framework is updated once every 5 years and this might pose a risk that if ambitions from governments in the areas we serve move faster than the spirit of the regulatory framework, this might be a constraining factor to drive the energy transition. 	<ul style="list-style-type: none"> • We mitigate this by lobbying on national and European level, run pilot projects and present business cases, and focus on those topics that promise the highest benefit for society, which are integration of power and hydrogen as well as flexibility and grid utilisation together with partners.
<ul style="list-style-type: none"> • Technology risk 	<ul style="list-style-type: none"> • A risk of stranded assets might occur in case a new technology is developed if for instance the new technology is unable to communicate with the old technology. Or if the technology used by TenneT is not able to connect or communicate with the technology used by other TSOs. 	<ul style="list-style-type: none"> • Mitigating actions include challenging the necessity of each investment and embracing other solutions, if those promise more societal value and actively work and invest in new technology as part of our strategy. Next to this, our approach to innovation aims to focus on the most important areas and implementing new technology as fast as possible, which reduces this risk.
<ul style="list-style-type: none"> • Market risk 	<ul style="list-style-type: none"> • Our market risks relate to dealing with the higher infeed of renewable energy sources and impacting the way we balance our grid and market prices. Renewable energy sources are more volatile and cannot easily be increased in case of a higher demand. Differences in market prices can lead to too high requests for energy at one location, e.g. Southern-Germany, where not all energy can be transmitted to the users. In such situations additional measures are required to balance the grid, such as redispatch. 	<ul style="list-style-type: none"> • TenneT plans and builds DC-grid connections in Germany and interconnectors within Europe. We investigate the grid integration of green hydrogen and power grids as well as improving the quality of data to predict power production and consumption.
<ul style="list-style-type: none"> • Reputation risk 	<ul style="list-style-type: none"> • A reputation risk could occur when we are unable to deliver on our strategic goal to drive the energy transition. Connected to this are the increasing ambitions of the governments in the areas we serve to meet these requirements. When realising our assets, we also have a reputational risk if there is a growing resistance from local communities and governments, if we do not engage with our stakeholders properly ('not in my backyard'). Furthermore the overall cost of the energy transition is also a risk from a reputational perspective (affordability). 	<ul style="list-style-type: none"> • To mitigate this risk we aim to communicate in an open and transparent fashion. Next to this, we invite stakeholders in the planning and approval process of projects to voice their opinion which we consider in, for example, the final route of a certain project. We also aim to balance affordability, sustainability and security of supply in all our investment decisions. Further mitigation takes place through the usage of professional planning, project management and costs forecasting.
<ul style="list-style-type: none"> • Physical risks • Acute  	<ul style="list-style-type: none"> • Acute risks are related to, for example, extreme weather conditions that could impact our assets and supply chain. 	<ul style="list-style-type: none"> • Acute weather conditions are mitigated during the design, construction and maintenance of our assets, such as the choice of location and the materials. Regarding our supply chain, monitoring of suppliers and diversification are mitigating factors.
<ul style="list-style-type: none"> • Chronic 	<ul style="list-style-type: none"> • Chronic physical risks can relate to rising sea and ground water levels for instance, where our assets might be at a risk due to this. 	<ul style="list-style-type: none"> • We monitor developments to gain more experience and insights related to the scenarios and effects. Examples include projects related to assets such as our Krimpen aan de IJssel substation and one of our pylons, which we both have elevated. TenneT insures all substations and buildings during construction and operation against risks from natural catastrophes. Pylons and overhead-lines are not insured.

Climate related opportunities

Opportunities	How might this affect TenneT?
<ul style="list-style-type: none"> • Resource efficiency 	<ul style="list-style-type: none"> • Increased decentralised power production and storage including self-balancing micro grids as well as electrolyzers if they are correctly located can relieve high-voltage grids. Furthermore, DC-interconnectors enhance the transmission of power of very long distances and connect renewable power production and demands in different countries. • Solutions related to flexibility help us to make smarter use of our grid. This might have a positive effect as this could lead to less grid expansion and therefore help us reduce the amounts of resources required to secure supply today and tomorrow.
<ul style="list-style-type: none"> • Energy source 	<ul style="list-style-type: none"> • TenneT is a leading investor in the energy transition and so we have been able to gain a vast amount of experience connecting renewable energy sources, such as offshore wind, to our grid. This experience helps us to further drive the energy transition together with partners and fulfil the future investment portfolio.
<ul style="list-style-type: none"> • Products and Services 	<ul style="list-style-type: none"> • Our project portfolio has significantly changed in order to meet national and European climate goals. Key projects are connecting offshore wind energy to our grid or to ensure that our onshore grid is prepared for a new energy future. The gathering and analysis of energy data may lead to new products and services provided by TSOs, such as Equigy.
<ul style="list-style-type: none"> • Markets 	<ul style="list-style-type: none"> • Strategies and objectives of financial institutes and banks provide opportunities for TenneT to attract sustainable financing at favourable terms and conditions by issuing green finance products to finance and refinance our investments in green infrastructure projects.
<ul style="list-style-type: none"> • Resilience 	<ul style="list-style-type: none"> • Trends in the society, like the electrification of mobility, result in higher demand on a stable grid and power supply. To ensure resilience, integration of power and gas grids is a vital alternative. Digitalisation using technologies like automatisaton, robotics and block-chain will help to optimise grid utilisation while safeguarding a reliable supply of electricity.



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* These sections reflect the director's report as mentioned by Part 9 of Book 2 of the Dutch Civil Code.

** These sections reflect the Other Information as required by Part 9 of Book 2 of the Dutch Civil Code.

Consolidated financial statements

Consolidated statement of financial position

For the year ended 31 December (EUR million)

Assets	Notes	2023	2022
Non-current assets			
Tangible fixed assets	10	11,764	26,823
Right of use assets	11	105	748
Intangible assets	12	254	306
Investments in joint ventures	14	211	630
Investments in associates	14	32	36
Deferred tax assets	8	580	711
Other financial assets	15	24	44
Total non-current assets		12,970	29,298
Current assets			
Inventories	16	15	132
Account- and other receivables	17	452	2,348
Income tax receivable	8	-	158
Cash and cash equivalents	18	673	6,547
Total current assets		1,140	9,185
Assets of disposal group classified as held for sale	2	27,613	26
Total assets		41,723	38,509

Consolidated statement of financial position

For the year ended 31 December (EUR million)

Equity and liabilities	Notes	2023	2022
Equity			
Equity attributable to ordinary shares	20	5,516	5,133
Hybrid securities	20	2,125	2,125
Equity attributable to owners of the company		7,641	7,258
Non-controlling interests	21	400	455
Total equity		8,041	7,713
Non-current liabilities			
Borrowings	22	18,871	19,006
Contract liabilities	23	530	531
Deferred tax liability	8	1	12
Provisions	24	490	1,235
Lease liabilities	11	90	574
Net employee defined benefit liabilities	25	-	174
Other financial liabilities	26	-	185
Other liabilities		10	31
Total non-current liabilities		19,992	21,748
Current liabilities			
Borrowings	22	3,640	709
Contract liabilities	23	12	17
Income tax payable	8	72	26
Provisions	24	54	77
Other financial liabilities	26	1,975	550
Lease liabilities	11	16	155
Account- and other payables	27	640	7,489
Total current liabilities		6,409	9,023
Liabilities of disposal group classified as held for sale	2	7,281	25
Total equity and liabilities		41,723	38,509

Consolidated statement of income

For the year ended 31 December (EUR million)

	Notes	2023	2022
Revenue	4	2,297	1,919
Grid expenses	5	-1,485	-2,174
Personnel expenses	5	-182	-137
Depreciation and amortisation of assets	10,11, 12	-375	-330
Other operating expenses	5	-218	-178
Other (gains)/losses	6	3	-6
Total operating expenses		-2,257	-2,825
Share in profit of joint ventures and associates	14	132	110
Operating result		172	-796
Finance income	7	41	41
Finance expenses	7	-147	-64
Finance result		-106	-23
Result before income tax from continued operations		66	-819
Income tax expense	8	1	229
Result for the year from continued operations		67	-590
Result for the year from discontinued operations after tax	2	644	-289
Result for the year		711	-879
Result attributable to:			
<i>Owners of the company</i>			
Equity holders of ordinary shares continued operations	20	10	-647
Equity holders of ordinary shares discontinued operations	2	585	-320
Hybrid securities	20	57	57
Owners of the company		652	-910
<i>Non-controlling interests</i>			
Result from discontinued operations	2, 21	59	31
Non-controlling interests		59	31
Result for the year		711	-879

Earnings per share attributable to the equity holders of ordinary shares

For the year ended 31 December (EUR per share)

	Note	2023	2022
Basic and diluted earnings per share from continuing operations	9	50	-3,235
Basic and diluted earnings per share from discontinuing operations	9	2,925	-1,600
Total basic and diluted earnings per share	9	2,975	-4,835

Consolidated statement of comprehensive income

For the year ended 31 December (EUR million)

	Notes	Retained earnings	Unappropriated result	Equity attributable to ordinary shares	Hybrid securities	Equity attributable to owners of the company	Non-controlling interest	Total equity
		20	20		30		21	
2022								
<i>Items not to be reclassified to profit or loss in subsequent years:</i>								
Remeasurement of defined benefit pensions	25	160	-	160	-	160	-	160
Taxation	8	-48	-	-48	-	-48	-	-48
Total other comprehensive income 2022		112	-	112	-	112	-	112
Result for the year		-	-967	-967	57	-910	31	-879
Total comprehensive income 2022		112	-967	-855	57	-798	31	-767
2023								
<i>Items not to be reclassified to profit or loss in subsequent years:</i>								
Remeasurement of defined benefit pensions	25	-29	-	-29	-	-29	-	-29
Taxation	8	9	-	9	-	9	-	9
Total other comprehensive income 2023		-20	-	-20	-	-20	-	-20
Result for the year		-	595	595	57	652	59	711
Total comprehensive income 2023		-20	595	575	57	632	59	691

Consolidated statement of changes in equity

For the year ended 31 December (EUR million)

(EUR million)	Notes	Attributable to equity holders of the company						Equity attribut- able to owners of the company	Non- con- trolling interest	Total equity
		Paid-up and called-up capital	Share premium reserve	Retained earnings	Unappro- priated result	Equity attribut- able to ordinary shares	Hybrid securities			
		20	20	20	20		20		21	
At 1 January 2022		100	1,790	3,396	-401	4,885	2,125	7,010	455	7,465
Result for the year		-	-	-	-967	-967	57	-910	31	-879
Total other comprehensive income		-	-	112	-	112	-	112	-	112
Total comprehensive income		-	-	112	-967	-855	57	-798	31	-767
Dividends paid	20	-	-	-	-141	-141	-	-141	-20	-161
Capital contribution	20	-	1,230	-	-	1,230	-	1,230	-	1,230
Capital repayment	20	-	-	-	-	-	-	-	-11	-11
Distribution on hybrid securities	20	-	-	-	-	-	-57	-57	-	-57
Tax on distribution on hybrid securities	20	-	-	14	-	14	-	14	-	14
Appropriation remaining prior year result		-	-	-542	542	-	-	-	-	-
At 31 December 2022		100	3,020	2,980	-967	5,133	2,125	7,258	455	7,713
Result for the year		-	-	-	595	595	57	652	59	711
Total other comprehensive income		-	-	-20	-	-20	-	-20	-	-20
Total comprehensive income		-	-	-20	595	575	57	632	59	691
Dividends paid	20	-	-	-	-207	-207	-	-207	-17	-224
Capital repayment	20	-	-	-	-	-	-	-	-97	-97
Distribution on hybrid securities	20	-	-	-	-	-	-57	-57	-	-57
Tax on distribution on hybrid securities	20	-	-	15	-	15	-	15	-	15
Appropriation remaining prior year result		-	-	-1,174	1,174	-	-	-	-	-
At 31 December 2023		100	3,020	1,801	595	5,516	2,125	7,641	400	8,041

Consolidated statement of cash flows

For the year ended 31 December (EUR million)

	Notes	2023		2022	
Operating result from continuing operations		172		-796	
Operating result from discontinuing operations		1,252		-180	
Operating result			1,424		-976
Non-cash adjustments to reconcile result to net cash flows:					
Depreciation, amortisation and impairment of assets	2, 10, 11, 12	1,350		1,233	
Result on disposal of assets		1		38	
Share in result of joint ventures and associates	14, 2	-150		-120	
Dividends received from joint ventures and associates	14, 2	155		92	
Movements in provisions and other (financial) liabilities and assets		12		104	
			1,368		1,347
Working capital adjustments excluding EEG working capital:					
(Increase)/decrease in account- and other receivables	15, 2	-342		-1,026	
(Increase)/decrease in inventories		-21		-49	
Increase/(decrease) in account- and other payables	27, 2	596		-33	
Increase/(decrease) in contract liabilities	23, 2	81		103	
Increase/(decrease) in current financial liabilities	26, 2	-177		269	
Cash generated from operation			137		-736
Income tax paid (net)			-140		-231
Net cash flows from operating activities excluding EEG working capital			2,789		-596
EEG working capital adjustments:					
(Increase)/decrease in EEG receivables	17, 2	-1,250		592	
(Increase)/decrease EEG deposits > 3 months	17, 2	-		472	
Increase/(decrease) in EEG payables	27, 2	-3,193		728	
			-4,443		1,792
Net cash flows from operating activities			-1,654		1,196
Investing activities					
Purchase of tangible and intangible fixed assets	10, 12, 27	-7,319		-4,424	
Proceeds from sale of tangible and intangible fixed assets		4		5	
Proceeds from sale of subsidiaries	13	33		-	
Interest received	7	35		45	
Capital repayments from joint ventures	14, 2	34		32	
Capital contribution to joint ventures and associates	14, 2	-		-3	
Net cash flows used in investing activities			-7,213		-4,345

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Consolidated statement of cash flows

For the year ended 31 December (EUR million)

	Notes	2023	2022
Financing activities			
Net financing			
Proceeds from borrowings	22	3,787	7,338
Repayment of borrowings	22	-1,004	-1,339
		2,783	5,999
Other financing activities			
Payment of lease liabilities	11	-177	-221
Interest paid		-417	-202
Capital contribution by ordinary shareholder of the company	20, 26	-	1,230
Contribution by ordinary shareholder of the company	20, 26	1,602	-
Dividends paid to ordinary shareholders of the company	20	-207	-141
Distribution on hybrid securities	20	-57	-57
Repayment of financial liability	26	-37	-20
Dividends paid and capital repayments to non-controlling interests	21	-114	-32
		593	557
Net cash flows from financing activities		3,376	6,556
Net change in cash and cash equivalents		-5,491	3,407
Cash and cash equivalents at 31 December	18	1,056	6,547
Cash and cash equivalents at 1 January	18	6,547	3,140
		-5,491	3,407

Notes to the consolidated financial statements

We are continuously improving our financial reporting to make it more relevant and understandable to our stakeholders. These financial statements focus on the material (financial) topics for 2023. Like last year, the notes to the consolidated financial statements are disclosed following largely the sequence of items in the consolidated statement of financial position and consolidated statement of income. Accounting policies are indicated with ⓘ, while key assumptions and estimates are identified by using 🌩 in front of the header.

1	Basis for reporting	120	25	Net employee defined benefit liabilities	171
2	Discontinued operations and assets classified as held for sale	122	26	Other financial liabilities	175
3	Segment information	127	27	Account- and other payables	175
4	Revenue	136	28	Financial risk management	176
5	Operating expenses	137	29	Fair values	180
6	Other (gains)/losses	140	30	ⓘ Accounting policies for financial instruments	180
7	Finance income and expenses	140	31	Contingencies and commitments	181
8	Corporate income tax	140	32	Related parties	183
9	Earnings per share	144	33	Consolidated subsidiaries	184
10	Tangible fixed assets	145	34	Events after the reporting period	185
11	Right of use assets and lease liabilities	147	35	Company accounting policies	188
12	Intangible assets	151	36	Personnel expenses	188
13	Business combinations and changes in consolidated entities	153	37	Other operating expenses	188
14	Investments in joint ventures and associates	154	38	Finance income	188
15	Other financial assets	157	39	Finance expenses	188
16	Inventory	158	40	Investments in subsidiaries	188
17	Account- and other receivables	158	41	Investments in associates	189
18	Cash, cash equivalents and bank overdrafts	159	42	Other financial assets	189
19	Capital management	160	43	Account- and other receivables	189
20	Equity	162	44	Equity	190
21	Non-controlling interests	163	45	Borrowings	190
22	Borrowings	166	46	Financial liabilities	190
23	Contract liabilities	168	47	Account- and other payables	191
24	Provisions	169	48	Events after the reporting period	191

1 Basis for reporting

Basis for preparation

The accounting policies describe our approach to recognise and measure transactions and balance sheet items in the financial statements. Accounting policies, including new European Union (EU) endorsed accounting standards, amendments and interpretations, relating to the consolidated financial statements as a whole are described below. This section also provides general guidance regarding assumptions, estimates and judgements used in the preparation of the financial statements. A more detailed description of accounting policies and material estimates related to specific reported amounts is presented in the respective notes. Only accounting policies that are deemed material are presented in these financial statements. We consider an item material if, in our view, it is likely to have an impact on the economic decisions of primary users of these financial statements.

General

TenneT Holding B.V. has subsidiaries which are leading electricity transmission system operator with activities in the Netherlands. Our activities are conducted by TenneT TSO B.V. and its subsidiaries.

The Dutch state owns the entire issued share capital of TenneT Holding B.V. Furthermore, TenneT Holding B.V. has issued hybrid securities which are deeply subordinated and are accounted for as part of equity attributable to equity holders of the Company. The registered office of TenneT Holding B.V. is located at Utrechtseweg 310, Arnhem, the Netherlands, with its statutory seat in Arnhem and a registration with the Dutch Commercial Register under number 09083317.

These consolidated financial statements of TenneT Holding B.V. and its subsidiaries (hereafter referred to as 'TenneT', 'the Company' or 'the Group') for the year ended 31 December 2023 were prepared by our Executive Board and authorised for issuance in accordance with a resolution of the Supervisory Board on 4 March 2024. The financial statements will be submitted for adoption at the General Meeting of Shareholders. These consolidated financial statements have been audited by Deloitte Accountants B.V.

Assets held for sale

In February 2023, TenneT started to explore the potential sale of German activities to the German state. Over the past year, constructive discussions have taken place between TenneT and KfW, acting on behalf of the German state, with close involvement of the German state and the Dutch state as TenneT's sole shareholder. The Dutch government supports the sale of German activities.

To the date of this report, no agreement has been reached yet on the potential sale of German activities. TenneT and KfW continue their discussions in the coming period, however it is not certain that a deal will be reached. TenneT considers that it is highly probable that a transaction will be concluded in 2024. In the consolidated financial statements the IFRS 5 'Non current assets held for sale and discontinued operations' standard is applied, which implies that the German activities are no longer continued per 31 December 2023.

NOVEC B.V. is a 100% subsidiary of TenneT Holding B.V. The activities of NOVEC are part of the segment non-regulated activities. Following a strategic review, considering TenneT's focus on the energy transition, it was concluded that TenneT Holding B.V. no longer needs to remain shareholder of NOVEC. Currently, TenneT is negotiating about a transaction and expects to finalise it within one year.

Further reference is made to note 2.

Basis for preparation

These consolidated financial statements are prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS) and Part 9 of Book 2 of the Dutch Civil Code. The company financial statements for TenneT Holding B.V. are prepared in accordance with the provisions of Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements are prepared on a going concern basis. The going concern basis presumes that the Group has adequate resources to remain in operation and that the Executive Board intends it to do so, for at least one year from the date of the end of the reporting period.

The consolidated financial statements are prepared on a historical cost basis, unless described otherwise in the accounting policy of a balance sheet position. They are presented in euros and all values are rounded to the nearest million (EUR 000,000), except when otherwise indicated.

Earnings per share are disclosed on voluntary basis, please refer to note 9.

Changes in accounting estimates

Annually, the Group reassesses its estimate for the useful lives of tangible fixed assets. Based on this year's review, the Group concluded that the useful lives of offshore platforms, cables (subsea) and the related decommissioning provision should be extended in the Netherlands. For more details reference is made to note 10. The useful lives are adjusted prospectively per 1 July 2023, resulting in a decrease of the depreciation of EUR 12 million in the last six months of 2023.

The Group has concluded that the useful lives of several onshore assets should be extended prospectively per 1 January 2024. The expected decreased depreciation is about EUR 40-50 million on an annual basis, impacting both continued (EUR 20-25 million) and discontinued operations (EUR 20-25 million).

Changes in EU-endorsed published IFRS standards and interpretations effective in 2023

Material new and amended standards adopted by the Group

- Amendments to IAS 8 Accounting policies, changes in accounting estimates and errors.
- Amendments to IAS 12 Income taxes.

TenneT has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

IFRS standards issued but not yet effective and adopted by the Group

- Amendments to IAS 1 Presentation of Financial Statements
- Amendments to IFRS 16 Leases
- Amendments to IAS 21 The effect of changes in foreign exchange rates
- Amendments to IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosure

It is anticipated that any issued changes to IFRS standards that are not yet effective and adopted by TenneT will not have a material impact.

Basis for consolidation

The consolidated financial statements incorporate the financial statements of TenneT Holding B.V. and its subsidiaries at 31 December 2023. A list of the legal entities included in the consolidation is included in note 33. Subsidiaries are consolidated from the date of acquisition, constituting the date on which control is obtained and continue to be consolidated until the date when such control ceases. The financial statements of subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. All intercompany balances, transactions, unrealised gains and losses resulting from intercompany transactions and dividends are eliminated in full in consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If we cease to have control over a subsidiary, we derecognise the subsidiary's assets (including goodwill), liabilities and any non-controlling interest in the former subsidiary at the date control is lost (including the cumulative translation differences). Furthermore, the fair value of the consideration received, the fair value of any investment retained and any surplus or deficit in statement of income are recognised. Acquisitions are accounted for using the acquisition method, where the purchase price is allocated to the identifiable assets acquired and liabilities assumed on a fair value basis and the remainder is recognised as goodwill.

Material accounting judgements, estimates and assumptions

The preparation of financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities and the reported amounts of revenue and expenses during the reporting period. Such estimates are assessed continuously on the basis of previous results and experience, consultations with experts, trends, prognoses and other methods which we deem appropriate in each individual case. Actual results could differ from these estimates. Material items containing estimates and assumptions are as follows:

Item	Note	Estimate/assumptions
Assets and liabilities held for sale, discontinued operations	2	Estimate of probable date of sale, estimate of sale price
		Estimate of remaining useful life, identification of cash-generating units for fixed asset impairment testing
		In both the assessment of the useful lives of our assets and in the design phase of new assets, climate related risks are considered.
Tangible fixed assets	10	Climate-related risks are reduced by adjusting design or taking mitigating measures.
Right of use assets and liabilities	11	Estimates of discount rate and expected extension or accelerated termination date
Intangible fixed assets	12	Estimate of recoverable amount and remaining useful life
Impairment review of goodwill	12	Estimate of cash flow projections and pre-tax discount rate
Grid expense payable	27	Amongst others estimate of electricity usage and energy prices
Impairment of current assets	17	Estimate of expected credit losses
Provision for environmental management and decommissioning	24	Estimate of removal costs, removal dates, discount rate and price increases in the period leading up to removal
Other provisions	24	Mainly relate to estimate of probability and realisation date
Net employee benefit obligations	25	Financial, actuarial and demographic assumptions

Functional currency

These consolidated financial statements are presented in euros, which is also the parent company's and all subsidiaries' functional currency.

Adjustment in prior year's figures

After publication of the TenneT Integrated Annual Report 2022, we identified a misstatement in the consolidated statement of comprehensive income and consolidated statement of income; The re-measurement of defined benefit pensions was reported as EUR 217 million and should have been reported as EUR 160 million, taxation was reported as -/- EUR 64 million and should have been reported as -/- EUR 48 million. The balance at 31 December 2021 for retained earnings was reported as EUR 3,355 million and should have been reported as EUR 3,396 million. We have adjusted the misstatement.

2 Discontinued operations and assets classified as held for sale

The majority of assets and liabilities classified as held for sale, are mainly related to TenneT GmbH & Co. KG and its subsidiaries (together TenneT Germany). The remaining part is related to the assets and liabilities of NOVEC B.V. For an explanation as to why the assets are classified as held for sale, please refer to note 1.

TenneT Germany

As a result of classifying TenneT Germany's operations as held for sale, TenneT Germany's operations are classified in the statement of income as discontinued operations. The activities are presented as if TenneT Germany were a third party to TenneT Holding B.V. and the group, except for loans issued to TenneT Germany. From a business perspective, these operations are continued and remain an integral part of the TenneT group. Also internal management reports still include German operations. Therefore the segment information still includes the German underlying operations.

Corporate tax expenses and corporate tax receivables of TransTenneT B.V. are also part of held for sale, since TransTenneT is responsible for the German corporate tax of the German activities.

TenneT has not recognised an impairment loss for any write-down of assets as the fair value less costs to sell is (expected to be) higher than the carrying amount.

Assets and liabilities

The major classes of assets and liabilities of TenneT Germany classified as held for sale at 31 December 2023 are as follows:

(EUR million)	Notes	31 December 2023
Assets		
Tangible fixed assets	10	21,880
Right of use assets	11	872
Intangible assets	12	119
Investments in joint ventures	14	384
Investments in associates	14	1
Deferred tax assets	8	272
Other financial assets	15	18
Inventories	16	138
Account- and other receivables	17	3,489
Income tax receivable	8	38
Cash and cash equivalents	18	383
Assets held for sale		27,594
Liabilities		
Deferred tax liabilities	8	2
Provisions (including net employee defined benefit obligation)	24, 25	1,510
Lease liabilities	11	862
Contract liabilities	23	85
Other liabilities		27
Other financial liabilities	26	169
Income tax payable	8	81
Account- and other payables	27	4,532
Liabilities held for sale		7,268
Net assets directly associated with disposal group		20,326

TenneT Holding has issued EUR 15.9 billion of long-term loans to TenneT Germany. These are eliminated in the group's financial statements and as such not part of liabilities held for sale. These loans relate to cash management activities of TenneT Holding B.V. with TenneT Germany. The agreed interest rate for the intercompany loans is our cost of fund rate +0.125bps. These receivables were unsecured. Refer to note 7. Furthermore cash loans of EUR 231 million were issued by TenneT Holding to TenneT Germany for cash operating activities. These cash loans have an agreed interest rate. Beside this TenneT Germany has cash loans issued to TenneT Holding of EUR 270 million.

The details about the net employee defined benefit liabilities are disclosed in note 25.

Statement of income

The results of TenneT Germany for the year are disclosed below.

(EUR million)	2023	2022
Revenue	7,001	6,380
Grid expenses	-4,482	-5,343
Personnel expenses	-153	-148
Depreciation and amortisation	-975	-903
Other operating expenses	-159	-144
Other gains/(losses) - netted	2	-32
Total operating expenses	-5,767	-6,570
Share in result of joint ventures and associates	18	10
Operating result	1,252	-180
Finance result	-347	-234
Result for income tax from discontinued operations	905	-414
Income tax expenses	-261	125
Result for the year from discontinued operations	644	-289
Result attributable to:		
Equity holders of ordinary shares	585	-320
Non-controlling interests	59	31
Result for the year from discontinued operations	644	-289

	2023	2022
Average workforce in FTEs	3,625	3,109

Revenue increased mainly due to a growing asset base in consequence of ongoing investments and higher compensation for certain cost of capital, as well as the in 2022 higher expected costs for system services (especially such as redispatch, grid losses and control power) as well as higher costs for grid and capacity reserve power plants.) which are incorporated in the tariffs of 2023.

The result from discontinued operations mainly increased due to higher revenues. These revenues increased as they are based on the in 2022 higher costs for ancillary services (part of grid expenses). The actual costs for ancillary services decreased compared to 2022. Both increased revenues and decreased costs for ancillary services result in an increased result of discontinued operations compared to 2022.

The net cash flows generated by TenneT Germany are as follows:

(EUR million)	2023	2022
Operating	-2,236	1,702
Investing	-4,393	-2,963
Financing	2,294	3,058
Net cash inflow/(outflow)	-4,335	1,797

Contingencies and commitments

Assets and liabilities held for sale also include contingencies and commitments. This consists mainly capital commitments issued, bank guarantees received and comfort letters received.

Capital commitments increased due to investments in 2GW projects. Capital commitments are commitments entered into with regard to the purchase of tangible fixed and to a very small fraction of intangible assets (2023: EUR 79 million, 2022: EUR 43 million). Approximately EUR 4.1 billion of capital commitments were payable within 12 months, as at 31 December 2023 (2022: EUR 3.3 billion).

Other off-balance sheet commitments mainly comprise a payment guarantee for specific payment obligations of TenneT Holding B.V. issued by the German Group.

(EUR million)	31 December 2023	31 December 2022 [*]
Investment related off-balance items		
<i>Off-balance sheet rights</i>		
Bank guarantees received and other items	1,828	1,563
Comfort letters received	2,165	1,620
Total	3,993	3,183
<i>Off-balance commitments</i>		
Capital commitments	24,445	8,063
Comfort letters issued	813	797
Total	25,258	8,860
Other off-balance items		
<i>Other off-balance obligations</i>		
Grid-related commitments	712	827
Other off-balance sheet commitments	5,382	5,068
Total	6,094	5,895

^{*} The 2022 figures have been included in the comparative figures of the "contingencies and commitments of continued operations" in note 31, for comparison reasons. Note that the 2023 figures of the discontinued operations are not included in note 31.

Electricity Revenue Cap Act

The Electricity Revenue Cap Act ("Strompreisbremsegesetz, StromPBG") was passed by the German legislator on 20 December 2022 and went into force on 24 December in the same year. It aimed to protect domestic end-consumers in 2023 from strongly increased electricity prices resulting from the turmoil on the energy markets in Europe following the Ukraine war. The Act expired on 31 December 2023.

Energy suppliers have processed the price caps in their individual invoices with end-consumers, the Transmission System Operators (TSOs) have paid them on monthly data. The TSOs were compensated for these payments by direct transfers from the government and by funds received from electricity generators. To enable the process, detailed rules for the calculation of excess revenues from generators as well as for the settlement and pay out to end-consumers are determined in the law.

Furthermore, the German regulator BNetzA has an oversight role in the process. Payments from TSOs to end-consumers via the energy suppliers started in February 2023 with retroactive effect as per January. First governmental transfer payments to bridge-finance started in February 2023. The first inflow of excess revenues from generators has started as of mid of August 2023. TSOs do not have any liquidity or profitability risks from the regime which they perform as trustees of society and on a pass-through basis.

There is no impact on the results and equity per 31 December 2023. As part of the Electricity Revenue Cap Act the Group received EUR 5.6 billion compensation from the government and by funds from electricity generators, which was passed on to end-consumers as a relief. The total effect on revenues in 2023 is EUR nil (2022: nil).

NOVEC B.V.

NOVEC's operations are not classified as discontinued operations, since it does not represent a major line of business, and as such the segment information still includes the NOVEC's underlying operations.

TenneT has not recognised an impairment loss for any write-down of assets as the fair value less costs to sell is (expected to be) higher than the carrying amount.

Assets and liabilities

The major classes of assets and liabilities of NOVEC classified as held for sale at 31 December 2023 are as follows:

(EUR million)	Notes	31 December 2023
Assets		
Tangible fixed assets	10	7
Right of use assets	11	7
Intangible assets	12	3
Investments in associates		1
Account- and other receivables	17	1
Assets held for sale		19
Liabilities		
Lease liabilities	11	6
Provisions		1
Account- and other payables	27	6
Liabilities held for sale		13
Net assets directly associated with disposal group		6

3 Segment information

This section sets out the financial performance for the year in accordance with the way in which we manage our business (operating segments). We measure and assess our performance based on underlying financial information, which is explained further below.

We generate substantially all of our revenue from our regulated operating segments in the Netherlands and Germany. Therefore, close collaboration with our respective regulators to obtain regulations and agreements that provide reasonable compensation for the risks we face, is key to us. Our involvement in certain limited non-regulated activities is closely related and ancillary to our core tasks.

Segment analysis

Our operating segments consist of:

- TSO Netherlands
- TSO Germany (part of discontinued operations and held for sale)
- Non-regulated activities (partly part of held for sale)

For the entire year TenneT has been steered on Dutch, German and non-regulated activities. TenneT Germany is included in the segment information as discontinued operations. TenneT will be steered on both Dutch, German and non-regulated activities until the sale will be materialised.

For management information purposes, the performance of our regulated activities in the Netherlands and in Germany is considered separately into two geographical segments. This segmentation, based on separately applicable regulatory frameworks, is the key determinant for financial management of the business and for decision-making on budgets, allocation of resources and financing.

Financing activities (including finance income and expenses) are managed on a Group basis and amounts related thereto are not allocated to the segments. Transfer prices between the Netherlands and Germany are set at arm's length in a manner similar to transactions with third parties. These intercompany transactions are eliminated in consolidation.

Our Executive Board is the chief operating decision-making body of the company (as defined by IFRS 8 'Operating segments'). Periodically, it monitors the performance of the respective operating segments for the purpose of performance management and decision making about resource allocation. The segment performance is based on underlying financial information, where EBIT, investments and return on capital are key metrics. The definition of EBIT equals operating result. Performance of non-regulated activities is evaluated based on EBIT and return on capital of these activities.

Underlying financial information is based on the principle of recognising regulatory assets and liabilities for all of our regulated activities. This implies that amounts resulting from past events and which are allowed to be received or are required to be returned through future tariffs are recorded as an asset or liability, respectively. TenneT's Executive Board believes that the presentation of underlying financial information provides additional relevant insight in the actual business, financial performance, and as such economic reality.

We have one (2022: nil) individual clients which is invoiced more than 10% of our total group underlying revenue. For the segment TSO Germany the revenue from this customer amounted to EUR 1,335 million (2022: not applicable).

(EUR million)	2023			2022		
	Underlying Assets	Underlying Liabilities	Investments	Underlying Assets	Underlying Liabilities	Investments
TSO Netherlands	15,586	9,020	2,948	12,328	7,697	1,527
Non-regulated companies	629	1,837	3	1,779	220	5
TSO Germany	-	-	-	27,115	21,574	2,961
Total continued segments underlying	16,215	10,857	2,951	41,222	29,491	4,493
TSO Germany (held for sale)	28,830	23,786	4,779	-	-	-
NOVEC B.V. (held for sale)	110	16	-	-	-	-
Total segments underlying	45,155	34,659	7,730	41,222	29,491	4,493
Eliminations and adjustments	-409	-99	-	-256	1,980	-
Consolidated underlying information	44,746	34,560	7,730	40,966	31,471	4,493

Matching is achieved through recognition of regulatory deferral accounts. The key requirement for such recognition is that an existing regulatory framework must be in place that permits the future reimbursement or requires the future settlement of regulated assets or liabilities, respectively. Consequently, a regulated asset is recognised in underlying financial information in respect of permitted reimbursements of current year expenses in future year's tariffs. Vice versa, a regulated liability is recognised in underlying financial information in respect of required settlements (i.e. repayments) of current year revenues through future tariffs. Furthermore, until 2015 certain investments in the Netherlands were financed via auction receipts resulting from auctioning available electricity transmission capacity on cross-border interconnections.

Investment amounts recognised under IFRS equal underlying investments. Investments consists of additions to tangible fixed assets, relate to note 10, and additions to intangible assets, relate to note 12.

Below the reconciliation between underlying total net assets and liabilities and IFRS total net assets and liabilities is disclosed:

(EUR million)	2023		2022	
	IFRS Assets	IFRS Liabilities	IFRS Assets	IFRS Liabilities
TSO Netherlands	13,563	8,479	10,828	7,260
Non-regulated companies	629	1,837	1,779	216
TSO Germany	-	-	26,157	21,339
Total continued segments IFRS	14,192	10,316	38,764	28,815
TSO Germany (held for sale)	27,831	23,450	-	-
NOVEC B.V. (held for sale)	110	16	-	-
Total segments underlying	42,133	33,782	38,764	28,815
Eliminations and adjustments	-410	-100	-255	1,981
Consolidated IFRS information	41,723	33,682	38,509	30,796

(EUR million)	2023	2022
Consolidated underlying information		
Assets	44,746	40,966
Liabilities	-34,560	-31,471
Total net assets and liabilities	10,186	9,495
To be settled in tariffs	-3,565	-2,847
Auction receipts	592	370
Valuation differences tangible fixed assets	-198	-218
Other regulatory receivables and payables	193	199
Tax impact	833	714
Total underlying impact	-2,145	-1,782
Consolidated IFRS information	8,041	7,713
Consolidated IFRS information		
Assets	41,723	38,509
Liabilities	-33,682	-30,796
Total net assets and liabilities	8,041	7,713

For an analysis of underlying results please refer to the 'Safeguard sustainable financial performance' section of the Integrated Annual Report.

Regulatory deferral accounts: reconciliation to IFRS figures

The difference between underlying financial information - as presented in the segment information and board report - and IFRS reported figures is related to the recognition of regulated assets and liabilities, auction receipts and the measurement of tangible fixed assets. In the IFRS financial statements, revenue from contracts with customers is recognised when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. In the underlying financial information revenues are recognised according to the allowed revenue as set by the regulator. By doing so, volume and post calculation differences are directly matched to the related costs and therefore provide additional relevant insight to manage TenneT's business.

These differences also result in different deferred tax balances in underlying financial information compared to IFRS reported figures. No other differences between underlying financial information and IFRS exist.

Underlying financial information can be reconciled to reported IFRS figures as follows:

(EUR million)	2023							Total
	TSO NL	Non- regulated	Elimina- tions within continued operation	Contin- ued opera- tions	TSO Germany (discontin- ued operations)	Total segments	Elimina- tions to discontin- ued opera- tions	
Connection and transmission services	2,094	-	-	2,094	4,516	6,610	-	6,610
Maintaining the energy balance	139	-	-	139	384	523	-	523
Operation of energy exchanges	1	-	-	1	-	1	-	1
Offshore (balancing)	465	-	-	465	1,452	1,917	-	1,917
Other	34	48	-	82	89	171	-	171
Inter-segment	53	5	-11	47	24	71	-71	-
Total underlying revenue	2,786	53	-11	2,828	6,465	9,293	-71	9,222
Grid expenses	-1,487	-1	2	-1,486	-4,003	-5,489	12	-5,477
Other operating expenses	-753	-54	9	-798	-1,339	-2,137	59	-2,078
Share in result of joint ventures and associates	2	130	-	132	18	150	-	150
Underlying operating result	548	128	-	676	1,141	1,817	-	1,817
Revenue adjustment to IFRS	-484	-	-	-484	560	76	-	76
Inter-segment adjustment	-	-	-27	-27	27	-	-	-
Cost adjustment to IFRS	7	-	-	7	-476	-469	-	-469
Discontinued operations to IFRS	-	-	-	-	-1,252	-1,252	-	-1,252
IFRS operating result	71	128	-27	172	-	172	-	172
Finance result								-106
Result before income tax from continued operations								66
Income tax expense								1
Result for the year from continued operations								67
Result from the year from discontinued operations								644
Result for the year								711

2022

(EUR million)	TSO NL	Non- regulated	Eliminations within continued operation	Continued operations	TSO Germany (discontinued operations)	Total segments	Eliminations to discontinued operations	Total
Connection and transmission services	2,459	-	-	2,459	4,333	6,792	-	6,792
Maintaining the energy balance	301	-	-	301	872	1,173	-	1,173
Operation of energy exchanges	2	-	-	2	-	2	-	2
Offshore (balancing)	286	-	-	286	1,387	1,673	-	1,673
Other	41	51	-	92	108	200	-	200
Inter-segment	28	-	-6	22	73	95	-95	-
Total underlying revenue	3,117	51	-6	3,162	6,773	9,935	-95	9,840
Grid expenses	-2,190	-1	-	-2,191	-4,714	-6,905	52	-6,853
Other operating expenses	-617	-52	6	-663	-1,279	-1,942	43	-1,899
Share in result of joint ventures and associates	2	109	-	111	11	122	-	122
Underlying operating result	312	107	-	419	791	1,210	-	1,210
Revenue adjustment to IFRS	-1,220	-	-	-1,220	-321	-1,541	-	-1,541
Inter-segment adjustment	-	-	-2	-2	2	-	-	-
Cost adjustment to IFRS	8	-	-	8	-651	-643	-	-643
Share in result of joint ventures and associates to IFRS	-1	-	-	-1	-1	-2	-	-2
Discontinued operations to IFRS	-	-	-	-	180	180	-	180
IFRS operating result	-901	107	-2	-796	-	-796	-	-796
Finance result								-23
Result before income tax from continued operations								-819
Income tax expense								229
Result for the year from continued operations								-590
Result from the year from discontinued operations								-289
Result for the year								-879

Reconciliation IFRS to underlying figures

2023

(EUR million)	IFRS figures Continued operations	Discontinued operations	Eliminations	Total	Underlying items	Underlying figures
Connection and transmission services	1,344	4,524	-	5,868	742	6,610
Maintenance of the energy balance	261	432	-	693	-170	523
Operation of energy exchanges	275	475	-	750	-749	1
Offshore (balancing)	345	1,473	-	1,818	99	1,917
Other	72	97	-	169	2	171
Total revenue	2,297	7,001	-	9,298	-76	9,222
Inter-segment	47	24	-71	-	-	-
Revenue including inter-segment	2,344	7,025	-71	9,298	-76	9,222
Grid expenses	-1,485	-4,482	-	-5,967	490	-5,477
Personnel expenses	-182	-153	-	-335	-1	-336
Depreciation and amortisation of assets	-375	-975	-	-1,350	-19	-1,369
Other operating expenses	-218	-159	-	-377	-1	-378
Other (gains)/losses	3	2	-	5	-	5
Total operating expenses	-2,257	-5,767	-	-8,024	469	-7,555
Inter-segment	-20	-51	71	-	-	-
Total operating expenses including inter-segment	-2,277	-5,818	71	-8,024	469	-7,555
Share in profit of joint ventures and associates	132	18	-	150	-	150
Operating result	172	1,252	-	1,424	393	1,817
Finance income	41	1	-	42	102	144
Finance expenses	-147	-348	-	-495	-15	-510
Finance result	-106	-347	-	-453	87	-366
Result before income tax	66	905	-	971	480	1,451
Income tax expense	1	-261	-	-260	-120	-380
Result for the year	67	644	-	711	360	1,071
Result attributable to:						
Equity holders of ordinary shares continued operations	10	-	-	10	945	955
Equity holders of ordinary shares discontinued operations	-	585	-	585	-585	-
Hybrid securities	57	-	-	57	-	57
Owners of the company	67	585	-	652	360	1,012
Non-controlling interests	-	59	-	59	-	59
Result for the year	67	644	-	711	360	1,071
Basic and diluted earnings per share	50	2,925		2,975		4,775
Underlying items						
To be settled in tariffs					829	
Auction receipts					-748	
Investment contributions					4	
Maintenance of the energy balance					-161	
Revenue					-76	

Reconciliation IFRS to underlying figures

2022

(EUR million)	IFRS figures Continued operations	Discontinued operations	Eliminations	Total	Underlying items	Underlying figures
Connection and transmission services	897	3,328	-	4,225	2,567	6,792
Maintenance of the energy balance	456	891	-	1,347	-174	1,173
Operation of energy exchanges	242	660	-	902	-900	2
Offshore (balancing)	242	1,387	-	1,629	44	1,673
Other	82	114	-	196	4	200
Total revenue	1,919	6,380	-	8,299	1,541	9,840
Inter-segment	22	73	-95	-	-	-
Revenue including inter-segment	1,941	6,453	-95	8,299	1,541	9,840
Grid expenses	-2,174	-5,343	-	-7,517	664	-6,853
Personnel expenses	-137	-148	-	-285	-	-285
Depreciation and amortisation of assets	-330	-903	-	-1,233	-21	-1,254
Other operating expenses	-178	-144	-	-322	-	-322
Other (gains)/losses	-6	-32	-	-38	-	-38
Total operating expenses	-2,825	-6,570	-	-9,395	643	-8,752
Inter-segment	-22	-73	95	-	-	-
Total operating expenses including inter-segment	-2,847	-6,643	95	-9,395	643	-8,752
Share in profit of joint ventures and associates	110	10	-	120	2	122
Operating result	-796	-180	-	-976	2,186	1,210
Finance income	41	1	-	42	-11	31
Finance expenses	-64	-235	-	-299	-10	-309
Finance result	-23	-234	-	-257	-21	-278
Result before income tax	-819	-414	-	-1,233	2,165	932
Income tax expense	229	125	-	354	-615	-261
Result for the year	-590	-289	-	-879	1,550	671
Result attributable to:						
Equity holders of ordinary shares continued operations	-647	-	-	-647	1,237	590
Equity holders of ordinary shares discontinued operations	-	-320	-	-320	320	-
Hybrid securities	57	-	-	57	-	57
Owners of the company	-590	-320	-	-910	1,557	647
Non-controlling interests	-	31	-	31	-7	24
Result for the year	-590	-289	-	-879	1,550	671
Basic and diluted earnings per share	-3,235	-1,600		-4,835		2,950
Underlying items						
To be settled in tariffs					2,603	
Auction receipts					-900	
Investment contributions					11	
Maintenance of the energy balance					-173	
Revenue					1,541	

The decrease in the underlying revenues can mainly be explained by:

- The lower costs for redispatch, grid losses, reserve power plants and control power in 2023 result in lower underlying revenues, since those lower costs will be reimbursed through future tariffs;
- Increased revenues due to ongoing and increasing investments, resulting in a growing regulatory asset base and higher onshore and offshore revenues which are based upon these asset base values;
- Increased regulatory returns due to an increase in interest rates.

The material differences between underlying financial information and IFRS are hereafter further disclosed:

To be settled in tariffs

Revenue surpluses and deficits resulting from variances related to actual costs or transmission volumes (ex post) and estimates used to set tariffs (ex ante) are incorporated in the tariffs of subsequent years in both Germany and the Netherlands. In underlying financial information, these surpluses and deficits are recorded as assets and liabilities, respectively, under 'to be settled in tariffs'. The expenses related to these items have to be settled in future tariffs in the coming years.

The underlying item 'to be settled in tariffs' is related to the revenue stream 'connection and transmission services' and 'offshore' and concerns an increase amounting to EUR 829 million (2022: increase of EUR 2,603 million).

Auction receipts & investment contributions

Auction receipts result from auctioning the available electricity transmission capacity on cross-border interconnections. These receipts are not at TenneT's free disposal. In accordance with Regulation (EU) 2019/943, auction receipts shall be used to fulfil the following priority objectives:

- a. guaranteeing the actual availability of the allocated capacity including firmness compensation; or
- b. maintaining or increasing cross-zonal capacities through optimisation of the usage of existing interconnectors by means of coordinated remedial actions, where applicable, or covering costs resulting from network investments that are relevant to reduce interconnector congestion.

In Germany, auction receipts are recognised as interest-free capital on investments and are released over 20 years. The reversal amounts are applied in the revenue cap of the TenneT TSO GmbH with t-2 offset. Thus, the reversal amount offsets the depreciation of the investments. When these priority objectives have been adequately fulfilled, auction receipts may be used as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs or fixing network tariffs, or both. In the Netherlands, TenneT agreed with its regulator (Autoriteit Consument en Markt) that investments in interconnectors are no longer financed through the auction receipts as of 2016. The current outstanding balance of auction receipts will be used in accordance with the aforementioned objectives. On 22 November 2022, the competence agreement of 2015 between TenneT and the ACM was dissolved. Investments in previous years financed by using auction receipts are classified as investment contributions and are reported under 'liabilities'. A periodic amount equal to the depreciation charges, plus a portion of the operating expenses, is released to the statement of income, following the release scheme as described above

The underlying item auction receipts is part of revenue stream 'operations of energy exchanges' for a decrease amounting to EUR 748 million (2022: decrease EUR 900 million). The underlying item investment contribution is part of revenue stream 'other' for an amount of EUR 4 million increase (2022: EUR 11 million increase).

Maintenance of the energy balance

As system manager of the high-voltage grid in the Netherlands, TenneT receives funds for performing certain statutory duties, such as the maintenance of the energy balance. The proceeds from these activities (i.e., imbalance settlements) may only be used after approval by the ACM. Imbalance settlements collected during the year are to be offset in transmission tariffs in the subsequent year. Consequently, these amounts are recorded as a liability and released in the subsequent year in the underlying financial information.

As the balancing group coordinator, TenneT TSO GmbH ('TTG') is responsible for balancing the balancing groups in terms of energy. We balance surplus or shortfall balancing groups by means of control energy and bill the balancing group managers for the resulting costs. For this billing of balance imbalances, the so-called 'Uniform balancing energy price across control zones' (reBAP) is used. As a result, TTG receives higher payments from the balancing group managers than TTG pays to the power plant operators. The resulting additional revenues from the balancing energy billing system are to be deducted from the grid charges. Analogously, revenue shortages will increase future grid fees.

The underlying item maintenance of the energy balance is part of revenue 'stream maintenance' of the energy balance for an amount of EUR 161 million decrease (2022: EUR 173 million decrease).

Depreciation and amortisation of assets

Differences in depreciation and amortisation of assets occur due to the difference in accounting treatment of the regulatory deferral accounts and the related cash flows in order to determine the economic useful life and recoverable amount of the assets resulting from acquisitions and used for impairment analysis.

Between Underlying and IFRS there is no difference in depreciation method, but the amount of depreciation differs due to an impairment under IFRS of the NorNed cable in 2015 of EUR 232 million which is not recognised under Underlying.

Accounting policies applied for underlying financial information

Underlying financial information matches regulatory revenues and expenses in a corresponding reporting period and defers certain income items until used for investments or tariff reductions.



4 Revenue

(EUR million)	2023					
	TSO NL	Non-regulated	Eliminations	Total segments	Eliminations	Total
Connection and transmission services	1,344	-	-	1,344	-	1,344
Maintenance of the energy balance	261	-	-	261	-	261
Operation of energy exchanges	275	-	-	275	-	275
Offshore (balancing)	345	-	-	345	-	345
Revenue to related parties	3	4	-	7	-	7
Other	21	44	-	65	-	65
Inter-segment	6	5	-11	-	-	-
Revenue to TenneT Germany	47	-	-	47	-47	-
Total IFRS revenue	2,302	53	-11	2,344	-47	2,297

(EUR million)	2022					
	TSO NL	Non-regulated	Eliminations	Total segments	Eliminations	Total
Connection and transmission services	896	-	-	896	-	896
Maintenance of the energy balance	456	-	-	456	-	456
Operation of energy exchanges	242	-	-	242	-	242
Offshore (balancing)	242	-	-	242	-	242
Revenue to related parties	5	4	-	9	-	9
Other	27	47	-	74	-	74
Inter-segment	6	-	-6	-	-	-
Revenue to TenneT Germany	22	-	-	22	-22	-
Total IFRS revenue	1,896	51	-6	1,941	-22	1,919

Connection and transmission services

Revenue from connection and transmission services is regulated by the ACM in the Netherlands and includes revenue from services provided to DSOs and industrial clients (such as resolution of transmission restrictions, congestion management and reactive power management). Increase in the revenues is mainly explained by the increase in the asset base and its related costs. The generated revenue of Net op Zee phase 2 is financed through the tariffs and included in this section of the revenue.

Maintenance of the energy balance

TenneT is responsible to ensure that electricity supply and demand is in balance at all times (i.e. the alternating current frequency in the power grid must be at 50 Hz continuously). If this balance is significantly disrupted, it may result in a power outage or even a black-out, depending on the length and severity of the imbalance. To ensure this balance, TenneT contracts and deploys (among others) reserve and emergency capacity to compensate unexpected fluctuations in supply and demand.

Revenue decreased mainly due to lower energy prices, which resulted in a lower price for the imbalance settlement.

Operation of energy exchanges

This amount includes revenues resulting from the auctioning of cross-border (electricity transmission "interconnection") capacity and with that the availability which determines the amount of this revenue stream. The majority of the increase in 2023 compared to 2022 was recognised in the long-term auctions, which amounted to an increase of EUR 132 million. This was due to uncertainties on the market when the annual auction was run in November 2022 and the appetite for these kind of auctions increased. This increase was for a large extend offset against the short-term auctions, which amounted to a negative effect of EUR 100 million.

Offshore

Offshore revenues are regulated by ACM in the Netherlands. The offshore revenues are a government grant obtained from the ministry of Economic Affairs & Climate Policy and is based on the revenue decision of the ACM. Offshore revenue increased mainly due to an increase of the asset base for Net op Zee phase 1 and assets that since 2023 generate revenues for the entire year, compared to 2022. Revenues furthermore increased due to a higher WACC.

① Accounting policy

Revenue primarily represents the sales value derived from the connection and transmission of electricity together with the sales value derived from the provision of other services to customers during the year. Revenue from contracts with customers is recognised when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

Revenues arise from contracts with a single performance obligation. The assessment of unbilled connection and transmission services supplied to customers between the date of the last meter reading and year-end is subject to significant judgement. This assessment is primarily based on expected consumption and weather patterns.

If revenue received or receivable exceeds the maximum annual amount as determined by the national regulator, ACM, a downward adjustment will be made to future tariffs to reflect this over-recovery. Under IFRS, no liability is recognised since this adjustment relates to the provision of future services. Similarly, no asset is recognised under IFRS when a regulator permits increases to be made to future tariffs in respect of under-recovery.

Offshore revenues in the Netherlands are accounted for in accordance with the recognition and measurement principles of IAS 20. These revenues are not recognised until there is reasonable assurance that the Group satisfies the conditions attached to receiving this income.

5 Operating expenses

Grid expenses

(EUR million)	2023	2022
System services	432	927
Connection and transmission services	715	803
Maintenance of the energy balance	138	293
Other ancillary services	23	-10
Total ancillary services	1,308	2,013
Maintaining and operating transmission grids	177	161
Total	1,485	2,174

Following mild weather, societal savings of fossil fuels, a diversification of gas supplies including LNG to Europe, and increased solar and wind output energy prices dropped significantly and the energy markets became less volatile in 2023. As such, our ancillary services costs decreased from EUR 2,013 million in 2022, to EUR 1,308 million in 2023. The grid expenses will be reimbursed through future tariffs, which will result in grid tariffs in future years. Please refer to note 3 for further details about differences between IFRS and Underlying financial information.

Personnel expenses

(EUR million)	2023	2022
Salaries	242	187
Social security contributions	27	21
Pension charges defined benefit plans	-	-
Pension charges other plans	36	34
Other personnel expenses	31	20
Capitalised costs for (in)tangible fixed assets	-154	-125
Total	182	137

Average internal workforce in FTEs (almost all are employed in the Netherlands)	2,652	2,320
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Personnel increased mainly due to increasing FTEs. Furthermore salaries has increased to compensate employees for increased inflation. Almost all employees (except for 16 FTEs (2022: 14 FTEs)) work in the Netherlands.

Key management remuneration

Members of the Executive Board and Supervisory Board are regarded as key management. Key management remuneration relates to both continued and discontinued operations.

Aggregate remuneration of members of the Supervisory Board and Executive Board is as follows:

Supervisory Board (EUR thousand)	Fixed remuneration	Committee fee	Total
2023	155	80	235
2022	128	61	189

Executive Board (EUR thousand)	Fixed remuneration	Pension cost	Total
2023	1,753	274	2,091
2022	1,682	409	2,091

The entire Executive Board consists of statutory directors. Pension remuneration equals (i) the contributions payable to the defined contribution plan for service rendered in the period or (ii), for defined benefit plans, the current service cost and, when applicable, past service cost. We refer to the Supervisory Board Report for a more detailed disclosure on remuneration.

Other operating expenses

(EUR million)	2023	2022
Accommodation and office expenses	57	48
Consultancy expenses	48	32
Hiring of temporary personnel	48	49
Travel and living expenses	19	8
Other expenses	46	41
Total	218	178

Other operating expenses mainly increased due increased portfolio and increased FTEs which lead to higher travel expenses and higher expenses for IT. Furthermore consultancy expenses increased, due to possible sale of TenneT Germany.

Auditors' remuneration

The fees listed in the table below relate to the services provided to the Company and its consolidated Group entity by Deloitte Accountants B.V., the Netherlands, the external auditor as referred to in section 1(1) of the Dutch Accounting Firm Oversight Act (Dutch acronym: Wta), as well as by other Dutch and non-Dutch Deloitte legal entities, including their tax services and advisory groups.

(EUR thousand)	2023	2022
Audit of the financial statements		
Deloitte Accountants B.V.	879	938
Deloitte GmbH Wirtschaftsprüfungsgesellschaft	789	718
Total audit of the financial statements	1,668	1,656
Other assurance services		
Deloitte Accountants B.V.	255	390
Deloitte GmbH Wirtschaftsprüfungsgesellschaft	409	278
Total other assurance services	664	668
Total audit fees	2,332	2,324

The costs related to Deloitte GmbH Wirtschaftsprüfungsgesellschaft are part of discontinued operations, relate to note 2.

The fees for the audit of the financial statements include the audit fees related to (i) TenneT's Integrated Annual Report, (ii) any statutory financial statements of subsidiaries and (iii) services that are normally provided by the auditor in connection with their audit mandate.

The other assurance fees include the aggregate fees invoiced for assurance and services for other audit services, which generally only the company's independent auditor can reasonably provide, such as comfort letters, regulatory statements and audits of grant statements.

① Accounting policy

TenneT has energy purchase contracts for the forward purchase of energy or gas that are used to satisfy physical delivery requirements to customers or for the energy that the group uses itself. Substantially all our costs of purchasing electricity for supply to customers are recoverable at an amount equal to cost. The timing of recovery of these costs can vary between financial periods leading to an under- or over-recovery within any particular year that can lead to large fluctuations in the IFRS income statement. We follow approved policies to manage price and supply risks for our commodity activities.

TenneT's energy procurement risk management policy and delegations of authority govern its commodity trading activities for energy transactions. The purpose of this policy is to ensure we transact within pre-defined risk parameters and only in the physical and financial markets where we or our customers have a physical market requirement. In addition, state regulators require TenneT to manage commodity risk and cost volatility prudently through diversified pricing strategies. In both the Netherlands and Germany, we are required to file a plan outlining our energy procurement strategy to be approved by the respective regulator. In certain cases, we might receive guidance with regard to specific hedging limits.

Energy purchase contracts for the forward purchase of electricity that are used to satisfy physical delivery requirements to customers, or for energy that TenneT uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. In note 28 of the consolidated financial statements commitments under such contracts have been disclosed as 'Grid related commitments'.

Operating expenses are expenses incurred during regular day-to-day business, such as system services, connection and transmission services, personnel expenses, depreciation and accommodation and travel costs. Operating expenses are recorded in the statement of income in the period they are incurred.

6 Other (gains)/losses

The net result on other (gains)/losses mainly consists of sold subsidiaries Novec GmbH and Globalways GmbH partly offset by impairment on IT projects.

7 Finance income and expenses

Finance income

This mainly relates to interest on bank accounts. For previous year finance income mainly relates to interest on a settled court case.

Finance expenses

(EUR million)	2023	2022
Interest on borrowings and credit facilities	394	245
Capitalised interest on assets under construction	-25	-12
Interest on provisions	8	6
Interest on lease liability	1	1
Other finance expenses	46	11
Subtotal interest expenses	424	251
Allocated to TenneT Germany	277	187
Total interest expenses	147	64

Gross finance expenses mainly increased due to bonds of 2022 that are recognised in 2023 for the first entire year. These bonds had higher interest rates as most of the bonds are issued before 2022. Interest on provisions increased due to the increased provisions and increased discount rates. Interest allocated to TenneT Germany relate to intercompany loans issued to TenneT Germany.

① Accounting policy

Finance expenses comprise mainly interest expenses, such as interest and fees on borrowings and credit facilities, interest on provisions and interest on lease liabilities. Finance expenses are recorded in the statement of income using the effective interest rate method.

8 Corporate income tax

TenneT strives to comply with all applicable tax legislation in a socially responsible manner, maintaining among the highest levels of transparency, quality and integrity. Management responsibility and oversight of our tax strategy lies with our 'Chief Financial Officer' (CFO), the Director Financial Governance and Services and the Head of Tax who monitor our tax activities and report to the Executive Board and the Audit, Risk and Compliance Committee.

Our tax strategy is fully consistent with our corporate strategy. Building a transparent relationship with tax authorities based on mutual trust is an integral part of this strategy. We have built and are continuously improving our tax internal control framework system to be 'in control' and of mitigate tax risks and to allow the company to demonstrate to all its stakeholders, including the tax authorities, that the company complies with all applicable laws and regulations.

Corporate income tax is payable in the Netherlands and Germany. In the Netherlands, we recently extended the so called 'horizontal monitoring agreement' with the Dutch tax authorities. Based on transparency and mutual trust, this agreement is meant to ensure that tax positions are fully disclosed and agreed on in advance, therefore generally no tax audits are performed by the Dutch tax authorities. The corporate income tax returns in the Netherlands have been filed up to and including 2021. Corporate income tax paid in the Netherlands in 2023 amounted to EUR 74 million.

In Germany, corporate income and trade tax returns for all German entities have been filed up to and including fiscal year 2022. In 2023, we paid EUR 66 million of corporate income and trade tax in Germany. German tax receivables and payables are part of assets classified as held for sale (refer to note 2). German tax expenses are part of discontinued operations (refer to note 2).

Key components of corporate income tax expense are:

Consolidated income statement (EUR million)	2023	2022
Current income tax charge	157	86
Deferred tax	-158	-315
Income tax expense reported in the statement of income	-1	-229

Consolidated statement of comprehensive income (EUR million)	2023	2022
Effect of remeasurement of defined benefit pensions	9	-48
Income tax charged directly to other comprehensive income	9	-48

Corporate income tax on results has been applied at the rates prevailing in the respective countries. In the Netherlands, a statutory corporate income tax rate of 25.8% was applied, while in Germany, on average, a marginal statutory corporate income tax rate of 30.1% was applied (including trade tax levied by municipalities or 'Gewerbesteuer'). Reconciliation between corporate income tax expense and the accounting result before income tax multiplied by a statutory corporate income tax rate of 25.8% is as follows:

(EUR million)	2023	2022
Result from continued operations before tax	66	-819
Result from discontinued operations before tax (note 2)	905	-414
Total result before tax	971	-1,233
Statutory corporate income tax rate in the Netherlands of 25.8% (2022: 25.8%)	251	-318
Effect of discontinued operations (including tax rate effect)	32	-17
Adjustment in respect to current and deferred tax of previous years	-	1
Non-deductible costs	13	10
Non-taxable income	-36	-30
At the effective corporate income tax rate of 27% (2022: 29%)	260	-354
Income tax expense reported in statement of profit and loss	-1	-229
Income tax expense attributable to discontinued operations (note 2)	261	-125
Total income tax expenses	260	-354

The main reason for the slightly higher effective tax rate of 26% compared to the Dutch statutory rate of 25.8% is the effect of the non-deductible costs and the effect of the discontinued operations (including the higher tax rate effect of the discontinued operations), which both increase the effective tax rate. This effect is largely compensated by the effect of the non-taxable income (due to Dutch participation exemption), which decreases the effective tax rate.

Deferred taxes relate to the following:

(EUR million)	Statement of financial position		Held for sale 2023	Statement of income	
	2023	2022		2023	2022
Auction receipts	-41	-41	-56	34	-6
Investment contributions	-62	-69	-4	-1	-2
Tariffs to be settled	566	327	-13	-179	-302
Depreciation for tax purposes	113	-108	-342	-8	-
Provisions	10	262	346	-2	-3
Result allocation to hybrid securities	-6	-6	-	-	-
Receivable/payable	-	343	342	-	-
Other	-1	-9	-3	-2	-2
Net deferred tax assets/(liabilities)	579	699	270		
Deferred tax expense/(income)				-158	-315

Deferred taxes are presented in the statement of financial position as follows:

(EUR million)	2023	2022
Deferred tax assets from continuing operations	580	711
Deferred tax liabilities from continuing operations	-1	-12
Deferred tax, net from continuing operations	579	699
Deferred tax assets from assets held for sale (note 2)	272	-
Deferred tax liabilities from liabilities held for sale (note 2)	-2	-
Deferred tax, net from assets and liabilities held for sale	270	-
Deferred tax, net	849	699

Movements in deferred tax positions are set out below.

(EUR million)	2023	2022
At 1 January	699	139
Tax expense during the period recognised in statement of income from continued operations	158	315
Tax expense during the period recognised in statement of income from discontinued operations	-19	293
Transfer to current tax payable	15	14
Deconsolidation	2	-
Tax income during the period recognised in equity	-15	-14
Tax income during the period recognised in other comprehensive income	9	-48
Transfer to held for sale (note 2)	-270	-
At 31 December	579	699

Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered. There are no unrecognised carry-forward losses per 31 December 2023 (2022: nil).

Pillar Two legislation

The TenneT Group has applied the temporary exception as issued by the IASB from the accounting requirements for deferred taxes in IAS 12. Accordingly, the TenneT Group neither recognises nor discloses information about deferred tax assets and liabilities related to Pillar Two income taxes.

In the Netherlands, the Pillar Two legislation is enacted, and will be effective as of 2024 and will be applicable to TenneT. Since TenneT is mainly operating in the Netherlands and Germany with statutory rates of 25.8% and 30.1% respectively. Based on a safe harbour analyses on the current year and the previous year financial information, the effective tax rate for TenneT Group in the Netherlands and Germany was not below 15%. Therefore, it is expected and estimated that the Pillar Two legislation will not lead to exposure for TenneT Group. The Pillar Two exposure will be further assessed in 2024.

Accounting policy

The corporate income tax charge for the period is recognised in the statement of income, equity or the statement of comprehensive income, in accordance with the relevant accounting treatment of the related transaction. The corporate income tax charge comprises both current and deferred tax.

Current income tax assets and liabilities are measured at the amount expected to be recovered from, or paid to, the tax authorities. The tax rates and tax laws used to calculate these amounts are those enacted or substantively enacted at the reporting date in those countries where we operate and where we generate taxable income.

Deferred tax is recognised using the liability method with respect to temporary differences between the tax bases of assets and liabilities and their respective carrying amounts for financial reporting purposes at the reporting date. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date in the relevant jurisdictions.

Deferred tax is generally recognised in respect of all temporary differences, the carry-forward of unused tax credits and any unused tax losses. Deferred tax assets (also in association with investments in subsidiaries, associates and interests in joint arrangements) are recognised to the extent that it is probable that taxable result will be available against which the deductible temporary differences and the carry-forward of unused tax credits and unused tax losses can be utilised. This assessment is performed annually. Deferred tax is not recognised for the temporary differences arising from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

Deferred tax assets and liabilities are recognised on a gross basis in the statement of financial position unless:

- the entity has a legally enforceable right to set off current tax assets against current tax liabilities and
- the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either:
 - the same taxable entity, or
 - different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

9 Earnings per share

Earnings per share were calculated by dividing results for the year attributable to ordinary shareholder of the Group, after adjustment for the distribution on hybrid securities, by the weighted average number of ordinary shares outstanding during the year. The following table reflects the income and share data used for the basic and diluted earnings per share calculations.

(EUR million)	2023	2022
Result attributable to ordinary equity holders of the parent:		
Continuing operations	10	-647
Discontinuing operations	585	-320
Result for the year attributable to equity holders of the company adjusted for the allocation to hybrid securities	595	-967
Weighted average number of ordinary shares in issue (in thousands)	200	200

① Accounting policy

Calculation of earnings per share is based on the result for the year attributable to TenneT's sole shareholder and the weighted average number of shares outstanding during the year.

10 Tangible fixed assets

(EUR million)	High-voltage substations	High-voltage connections	Other assets	Assets under construction	Total
Cost					
At 1 January 2022	11,732	10,145	1,151	7,600	30,628
Additions	252	331	-6	3,825	4,402
Transfers	996	1,071	163	-2,230	-
Changes in estimations	-170	-120	-	-22	-312
Impairment	-	-	-	-9	-9
Disposals	-92	-11	-5	-11	-119
Transfer to held for sale (note 2)	-	-	-12	-	-12
At 31 December 2022	12,718	11,416	1,291	9,153	34,578
Additions	242	174	201	6,986	7,603
Transfers	2,144	1,464	45	-3,653	-
Changes in estimations	-23	399	-	14	390
Deconsolidation of subsidiaries (note 13)	-	-	-13	-	-13
Acquisition of a subsidiary (note 13)	-	-	3	-	3
Disposals	-23	-40	-8	-2	-73
Transfer to held for sale (note 2)	-10,028	-7,927	-1,015	-8,456	-27,426
At 31 December 2023	5,030	5,486	504	4,042	15,062
Depreciation and impairment					
At 1 January 2022	3,489	2,878	450	-	6,817
Depreciation for the year	555	407	60	-	1,022
Disposals	-73	-9	-2	-	-84
At 31 December 2022	3,971	3,276	508	-	7,755
Depreciation for the year	628	441	67	-	1,136
Deconsolidation of subsidiaries (note 13)	-	-	-2	-	-2
Acquisition of a subsidiary (note 13)	-	-	4	-	4
Disposals	-16	-38	-2	-	-56
Transfer to held for sale (note 2)	-3,253	-2,018	-268	-	-5,539
At 31 December 2023	1,330	1,661	307	-	3,298
Net book value:					
At 1 January 2022	8,243	7,267	701	7,600	23,811
At 31 December 2022	8,747	8,140	783	9,153	26,823
At 31 December 2023	3,700	3,825	197	4,042	11,764

High-voltage substations include onshore and offshore transformer and converter stations. High-voltage connections consist of overhead and underground connections. Unlike lands for substations, lands surrounding high-voltage pylons and cables are generally not owned by TenneT. Other tangible fixed assets consist of office buildings, office ICT equipment and other company assets.

Assets under construction include investments new build onshore and offshore transformer and converter stations and onshore lines and offshore platforms and (subsea) cables. We refer to our [website](#) for more details.

In 2023 the discount rate used for the decommissioning provision was between 2.328% and 2.443% (2022: 2.086% and 2.942%) for offshore wind farms (OWF) connections consisting of offshore platforms and (subsea) cables, (refer to note 24). The discount rate was adjusted in 2023 to reflect current market assessments of the time value of money and the risks specific to this liability. The main part of the decommissioning provision was recognised as part of the carrying value of the related asset. Besides the change of the discount rate, also changes in inflation, changes in underlying assumptions and updated price levels are included in the change of estimates.

In 2023 an analysis within tangible fixed assets led to a change in the presentation of converter halls. To improve understandability they were reclassified from other assets to high-voltage substations, accordingly costs of EUR 138 million and depreciation of EUR 51 million were transferred.

The amount of borrowing costs capitalised during 2023 is disclosed in note 7. The effective interest rate used to determine the amount of borrowing costs capitalised was 1.86% (2022: 1.34%).

Annual impairment trigger analyses on tangible assets, and where applicable testing for impairment, is done at the individual asset level, or smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets (cash generating units (CGUs)). For our three operating segments this consists of:

- TSO Netherlands (One large CGU consisting of regulated on- and offshore assets, and the NorNed cable, considered for impairment (triggers), on individual level);
- TSO Germany (One large CGU consisting of regulated on- and offshore assets), part of discontinued operations and assets held for sale (refer to note 2);
- Non-regulated companies (Several small CGUs as well as individual assets).

The non-regulated companies also include the Joint Venture investment in the BritNed cable, tested, for impairment (triggers), on individual level.

Off balance commitments related to tangible fixed assets are disclosed in note 31.

Key estimates and assumptions

To calculate depreciation amounts, the following useful lives of various asset categories were assumed:

Estimated useful lives tangible fixed assets	2023	2022
Substations		
Switches and offshore converter stations	20-35	20-35
Offshore platforms	20-35	20
Security and control equipment	10-20	10-20
Power transformers	20-35	20-35
Capacitor banks	20-35	20-35
Telecommunications equipment	10-20	10-20
Connections		
Pylons/lines	35-40	35-40
Cables (subsea and underground)	20-40	20-40
Other		
Office buildings	40-50	40-50
Office IT equipment	3-5	3-5
Process automation facilities	5	5
Other company assets	5-10	5-10

For assets in the Netherlands useful lives of offshore platforms and (subsea) cables have been extended with 5 years, from 1 July 2023 onwards, resulting in a decrease of the depreciation. New offshore platforms have a useful life of 35 years.

Residual values, useful lives and methods of depreciation of assets are reviewed at each financial year-end and adjusted prospectively, if appropriate.

① Accounting policy

Tangible fixed assets are valued at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such costs include the cost of replacing part of the asset and borrowing costs for long-term construction projects if the recognition criteria are met. When material parts of the asset are required to be replaced at intervals, such parts are recognised as individual assets with specific useful lives and depreciated accordingly. Likewise, when major maintenance is performed, its cost is recognised in the carrying amount of the asset as a replacement, if the recognition criteria are met. All other repair and maintenance costs are recognised in the statement of income as incurred. The present value of the expected cost for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met. Depreciation is calculated on a straight line basis.

An asset is impaired or disposed or when no future economic benefits are expected from its use. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the statement of income when the asset is impaired or disposed.

General and specific borrowing costs directly attributable to the acquisition, construction or production of the tangible fixed assets, are added to the cost, until such time that the assets are substantially ready for their intended use or sale. No borrowing costs are capitalised if and to the extent such borrowing costs are directly compensated in the year of construction.

11 Right of use assets and lease liabilities

Right of use assets

(EUR million)	Land & buildings	Power plants	NordLink cable	Other right-of-use assets	Total
Cost					
At 1 January 2022	117	81	159	76	433
Additions	32	-	-	6	38
Disposal	-	-	-	-8	-8
Remeasurement	13	98	355	3	469
Depreciation	-21	-70	-73	-17	-181
Transfer to held for sale (note 2)	-	-	-	-3	-3
At 31 December 2022	141	109	441	57	748
Additions	9	397	-	16	422
Disposal	-2	-	-	3	1
Remeasurement	9	-14	-10	2	-13
Depreciation	-23	-64	-71	-18	-176
Transfer to held for sale (note 2)	-65	-428	-360	-24	-877
At 31 December 2023	69	-	-	36	105

Leased Land & Buildings

Land is mainly leased to set up pylons for electricity transmission lines and for constructed substations. These contracts run for a period of 18-142 years. Buildings are leased mainly as office space and for storage space. These contracts run for a period of 1-22 years.

Lease contracts for buildings are negotiated individually and include a range of different terms and conditions, including extension options.

Lease payments are in substance fixed, only a minority of the lease contracts contain clauses with reference to the consumer price index (CPI) index.

Leased power plants

Leased power plants are as of 2023 part of assets held for sale refer to note 2.

Till effective date of potential sale, TenneT is committed to the use of grid reserve power plants representing lease commitments according to IFRS 16. The commitments had a maturity of 1-10 years (2022: 1-3 years) and could be prolonged depending on the decision of regulatory authorities.

Lease payments were in substance fixed and TenneT had no power plant leases which contained variable lease payments. Lease contracts did not include any clauses with reference to an index or contractual rate.

Leased NordLink cable

The leased NordLink cable is as of 2023 part of held for sale refer to note 2.

Till effective date of potential sale, TenneT leases the NordLink submarine cable from NOKA to transport electricity between Germany and Norway. The lease contract was extended which resulted in a remeasurement and had a remaining maturity of 5 years and no extension option according to IFRS 16, was included in the lease contract. Lease payments were in substance fixed.

Leased others

Telecom lease contracts (including fibreglass cables) run for a period between 5 and 30 years. For qualifying employees TenneT leased cars with a lease term between 1 and 8 years. TenneT does not purchase or guarantee the value of leased telecom assets or leased cars.

TenneT had several contracts with termination/extension options. In determining the lease term all relevant facts and circumstances that create a significant economic incentive to exercise those options are taken into consideration.

TenneT had no material 'sub lease' contracts in 2023 and 2022 and therefore no material income from subleasing right-of-use assets. TenneT has not entered into any sale and leaseback contracts. No lease contracts with residual value guarantees are entered into. No lease contracts have been concluded that contain restrictions or covenants.

Lease payments were in substance fixed, only some of the lease contracts had pre-determined lease payment changes.

Short-term leases and leases of low value

TenneT leased certain other assets with terms up to 1 year. TenneT considers these assets to be of low-value or short-term in nature and therefore no right of use assets and lease liabilities were recognised for these leases. The aggregate total of short-term lease expenses for more than one month and low value assets lease expenses amounted to EUR 2 million (2022: EUR 2 million).

Lease liability

(EUR million)	2023			2022		
	Current	Non-current	Total	Current	Non-current	Total
Lease liability Land & buildings	10	59	69	20	121	141
Lease liability power plants	-	-	-	53	62	115
Lease liability NordLink	-	-	-	66	349	415
Lease liability other leases	6	31	37	16	42	58
Total	16	90	106	155	574	729

(EUR million)	Lease liability Land & buildings	Lease liability power plants	Lease liability NordLink	Lease liability other leases	Total
At 1 January 2022	118	81	130	75	404
Addition	28	-	-	6	34
Interest	1	-	3	1	5
Disposal	-	-	-	-8	-8
Remeasurement	12	98	355	5	470
Repayments	-18	-64	-73	-18	-173
Transfer to held for sale (note 2)	-	-	-	-3	-3
At 31 December 2022	141	115	415	58	729
Addition	9	397	-	16	422
Interest	2	4	11	1	18
Disposal	-	-4	-	-1	-5
Remeasurement	9	-14	-10	2	-13
Repayments	-26	-56	-80	-15	-177
Transfer to held for sale (note 2)	-66	-442	-336	-24	-868
At 31 December 2023	69	-	-	37	106

The total cash outflow (including low value items and short-term leases) in 2023 was EUR 179 million (2022: EUR 223 million). There are no material future cash outflows of leases not yet commenced but to which TenneT is committed.

The undiscounted maturity analysis of lease liabilities is disclosed in note 28.

The table below reconciles the costs in the profit and loss related to lease liabilities.

(EUR million)	2023	2022
Depreciation expense of right-of-use assets	-16	-14
Short-term lease expenses	-	-2
Interest expense on lease liabilities	-1	-1
Total amount recognised in profit and loss	-17	-17

Below the discounted maturity of the lease liability:

(EUR million)	2023	2022
<1 month	2	13
1 to 3 months	2	22
3 to 12 months	12	146
1 to 5 years	42	404
More than 5 years	48	144
Total discounted maturity	106	729

① Accounting policy

At inception of a contract, TenneT assesses whether a contract conveys the right to control the use of an identified asset for a period in exchange for consideration, in which case it is classified as a lease.

TenneT recognises a right-of-use asset and a lease liability at the lease commencement date. The asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to restore the underlying asset, less any lease incentives received.

The lease asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term, considered to be indicated by the lease term. The lease asset is periodically adjusted for certain remeasurements of the lease liability and impairment losses (if any).

The lease liability is initially measured at the present value of outstanding lease payments, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, TenneT's incremental borrowing rate. If available, the interest rate implicit in the lease is used for discounting (e.g. car leases). Otherwise the incremental borrowing rate is used and shown in the table below.

	2023	2022
Under 5 years	2.6%	0.0%-0.5%
5-10 years	3.2%	0.1%-1.6%
10-15 years	3.5%	0.4%-2.2%
15-25 years	3.7%	0.7%-2.5%
Above 25 years	3.9%	1.1%-2.8%

After initial recognition, the lease liability is measured at the present value of the remaining lease payments using the effective interest method and is remeasured when there is a change in future lease payments arising from a change in an index or rate or if TenneT changes its assessment of whether it will exercise a purchase, extension or termination option. A corresponding adjustment is made to the carrying amount of the right-of-use asset with any excess over the carrying amount of the asset being recognised as profit or loss.

Short-term leases and leases of low value

TenneT has elected not to recognise right-of-use assets and lease liabilities for short-term leases (leases with a term of 12 months or less) and leases of low-value assets. TenneT recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term or another systematic basis if that basis is more representative of the pattern of the lessee's benefit. Furthermore, TenneT has elected not to recognise the lease of intangible assets.

12 Intangible assets

(EUR million)	Goodwill	Software	Customer contracts	Other intangible assets	Intangible assets under construction	Total
Cost						
At 1 January 2022	34	357	64	47	73	575
Additions	-	3	-	-	88	91
Transfers	-	46	-	-	-46	-
At 31 December 2022	34	406	64	47	115	666
Additions	-	12	-	1	114	127
Transfers	-	117	-	-	-117	-
Impairment	-	-	-	-	-2	-2
Deconsolidation of subsidiaries (note 13)	-3	-	-	-6	-	-9
Transfer to held for sale (note 2)	-28	-115	-	-2	-39	-184
At 31 December 2023	3	420	64	40	71	598
Amortisation and impairment						
At 1 January 2022	-	242	62	17	-	321
Amortisation for the year	-	35	2	2	-	39
At 31 December 2022	-	277	64	19	-	360
Amortisation for the year	-	45	-	1	-	46
Transfer to held for sale (note 2)	-	-60	-	-2	-	-62
At 31 December 2023	-	262	64	18	-	344
Net book value:						
At 1 January 2022	34	115	2	30	73	254
At 31 December 2022	34	129	-	28	115	306
At 31 December 2023	3	158	-	22	71	254

At 31 December 2023 goodwill was allocated to the cash generating units (CGUs) in the following operating segments: TSO Netherlands (EUR 3 million). At 31 December 2022 also goodwill was allocated to the TSO Germany CGU (EUR 24 million) and non-regulated activities (EUR 7 million). Please refer to note 2 and note 13 for details on change of goodwill.

During 2023 EUR 39 million (2022: EUR 46 million) of software was internally developed.

Additions to intangible assets under constructions mainly relate to customising activities of a new ERP (enterprise resource planning) system and other software systems.

Key estimates and assumptions

Estimated useful lives intangible assets	Years
Goodwill	Indefinite
Software	3-12
Customer contracts	10-14
Purchased rights to use land	25-45
Other	5-15

Intangible assets, with the exception of goodwill, are assumed to have a fixed useful life within the ranges outlined above and are amortised over this useful life. The useful life is re-assessed each reporting period. Intangible assets are amortised on a straight line basis, as this best reflects the use of the asset.

Additions to intangible assets under construction relate to a variety of software projects including the continuing customizing activities of a new ERP (enterprise resource planning) system.

Goodwill is assumed to have an indefinite useful life and is therefore not amortised, but is tested for impairment annually or more frequently, if events or changes in circumstances indicate a triggering event, either individually or at CGU level.

Impairment testing of goodwill

For the purpose of annual impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs. For our three operating segments this consists of:

- TSO Netherlands (One large Cash Generating Unit consisting of regulated on- and offshore assets)
- TSO Germany (One large Cash Generating Unit consisting of regulated on- and offshore assets) (part of discontinued operations and assets held for sale, refer to note 2)
- Non-regulated companies (Several small Cash Generating Units, refer to note 2)

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects our assessment of current market conditions in respect of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, an appropriate valuation model is used, if no recent market transactions can be identified.

The impairment calculation is based on detailed projections, which are prepared separately for each of the CGUs to which the individual assets are allocated. The projections take into account current regulatory parameters, considering expected future regulatory developments. Management believes that the resulting cash flows can be determined reliably and that they give an appropriate reflection of the CGU's cash flow generating potential.

The recoverable amount of the Germany CGU was determined based on a value-in-use calculation using cash flow projections following our investment portfolio. The pre-tax discount rate applied to cash flow projections was 6.0% (2022: 6.7%). The cash flows were estimated on the basis of regulatory allowed returns and invested capital, based on TenneT's business plan and a transition period to reach a steady state. The terminal value is determined by the invested capital (adjusted for regulatory minus IFRS NBV of tangible fixed assets). We concluded that the recoverable amount was significantly in excess of the carrying value and as such no impairment loss needed to be recognised and as such no impairment is required.

① Accounting policy

Intangible assets are measured at acquisition cost on initial recognition. The cost of intangible assets acquired in a business combination is recognised at fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and accumulated impairment losses. Except for capitalised development costs, internally generated intangible assets are not capitalised and expenses are reflected in the statement of income in the period in which they incur.

Goodwill is initially measured at cost and represents the excess (i) of the consideration transferred over (ii) TenneT's interest in the value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the amount of the non-controlling interest in the acquiree. After initial recognition, goodwill is measured at cost less accumulated impairment losses.

At each reporting date, we assess whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the asset's recoverable amount is estimated. The recoverable amount is the higher of an asset's or CGU's fair value less costs of disposal and its value in use. If the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

13 Business combinations and changes in consolidated entities

Mergers and acquisitions

As per 1 September Relined B.V. has acquired Nederlands-Duitse Internet Exchange B.V. for a not material purchase price.

As per 25 October TenneT Holding B.V. established together with Gasunie N.V. National Energy Information Services B.V. Both shareholders have 50% of the shares.

Assets and liabilities classified as held for sale

Assets and liabilities classified as held for sale entirely mainly relate to TenneT Germany. The Group holds per 31 December 2023 100% interest in TenneT Germany. Please refer to note 2.

Furthermore the assets and liabilities of NOVEC B.V. are classified as held for sale. Please refer to note 2.

As per 31 December 2022 the assets and liabilities classified as held for sale fully relate to NOVEC GmbH.

Divestments

At 27 November 2023 Relined GmbH sold Globalways GmbH to Zayo Infrastructure Deutschland GmbH, located in Frankfurt, Germany for a price of EUR 24 million, this resulted in a net gain of EUR 2 million.

At 30 November 2023 NOVEC B.V. sold NOVEC GmbH to Phoenix Tower International, located in Boca Raton, FL, USA, for a price of EUR 11 million, this resulted in a net gain of EUR 10 million.

① Accounting policy

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of assets and liabilities measured at their acquisition-date fair value (with a limited number of specified exceptions) including the amount of any non-controlling interest in the acquiree. For each business combination, we decide whether to measure the non-controlling interest in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred in connection with an acquisition and included in other operating expenses (see note 5).

Non-current assets held for sale are defined as non-current assets (other than financial instruments or property investments) immediately available for sale and highly probable to be sold within a year. Non-current assets held for sale have been stated at the lower of (i) the asset's carrying value and, (ii) fair value less costs of disposal.

Acquisitions

The company accounts for business combinations using the acquisition method when control is transferred to the group. The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired and the liabilities assumed. Transaction costs are expensed as incurred. Any contingent consideration is measured at fair value at the acquisition date and is initially presented in long-term provisions. When the timing and amount of the consideration become more certain, it is reclassified to accrued liabilities. If the contingent consideration that meets the definition of a financial instrument is classified as equity, it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognised in the Consolidated statements of income.

Changes to the initial fair value of the acquired assets and liabilities, based on new information about the circumstances at the acquisition date, can be made up to twelve months after the acquisition date.

Divestments

Upon loss of significant influence over the business combinations, any retained investment is valued at fair value. Any difference between the carrying amount of the investment upon loss of significant influence and the fair value of the retained investment and proceeds from disposal is recognised in the statement of income.

Upon loss of control, the company derecognises the assets and liabilities of the subsidiary, any non-controlling interests and the other components of equity related to the subsidiary, any surplus or deficit arising from the loss of control is recognised in the consolidated statement of income. If the company retains any interest in the previous subsidiary, such interest is measured at fair value at the date the control is lost. Subsequently it is accounted for as either an equity-accounted investee (associate) or as a financial asset, depending on the level of influence retained. Further information on loss of control can be found in discontinued operations and assets classified as held for sale (refer to note 2).

14 Investments in joint ventures and associates

Joint ventures

TenneT has, directly or indirectly, 50% equity stakes in BritNed Development Ltd. ('BritNed'), Reddyn B.V., VertiCer B.V., NED B.V. and Tensz B.V. We have a 20% equity stake in Equigy B.V. For the investment in Equigy B.V., joint control is exercised, despite unequal equity stakes. Therefore this investment is classified as joint venture. As of 25 October 2023 TenneT has a 50% participation in National Energy Information Services B.V. (NEIS).

These investments are classified as joint ventures, for which only the investment in BritNed (legal seat: Arnhem, the Netherlands) is considered as an investment of material value. Other joint ventures are considered immaterial per 31 December 2023 and are therefore not further disclosed. TenneT's share in result (which is equal to other and total comprehensive income) of these immaterial joint ventures amounted to EUR 2 million in 2023 (2022: EUR 1 million).

As per 31 December 2023 TenneT has, directly or indirectly, also 50% stakes in DC Nordseekabel GmbH & Co. KG ('NOKA'). DC Nordseekabel Beteiligungs GmbH and Flexcess GmbH. NOKA (legal seat: Bayreuth, Germany) was considered as an investment of material value. Flexcess GmbH has a 20% participation in Equigy B.V. effective as of 1 January 2022. At 31 December 2023 these are part of assets classified as held for sale and discontinued operations.

As per 31 December TenneT has, directly or indirectly, also 25% stakes in Open Tower Company (OTC). For this investment, joint control was exercised, despite unequal stakes. Therefore this investment was classified as joint venture. OTC was considered as an investment of material value. At 31 December 2023 it was part of assets classified as held for sale.

BritNed is the only material joint venture at 31 December 2023. The table below contains summarised financial information with respect to material joint ventures and a reconciliation with their carrying amounts.

Statement of financial position (EUR million)	2023	2022		
	BritNed	BritNed	NOKA	OTC
Non-current assets	446	458	783	80
Cash and cash equivalents	99	140	55	22
Other current assets	20	23	10	2
Non-current liabilities	-45	-47	-33	-134
Current liabilities	-106	-119	-15	-5
Equity	414	455	800	-35
<i>Ownership TenneT</i>	50%	50%	50%	25%
Carrying amount of the investment	207	228	400	-

	2023	2022
	BritNed	BritNed
Statement of income (EUR million)		
Revenue	374	304
Depreciation and amortisation	-18	-18
Other costs	-32	-22
Operating result	324	264
Finance income and expenses	-2	-3
Income tax expense	-78	-59
Result for the year*	244	202
<i>Ownership TenneT</i>	50%	50%
Group's share in result	122	101

* Result for the year is equal to other and total comprehensive income.

BritNed

BritNed is a joint venture with National Grid International Ltd (National Grid), the British TSO. It owns and operates a 1,000 MW 'Direct Current' (DC) interconnector between the United Kingdom and the Netherlands. Operating costs and trading revenue are shared equally between TenneT and National Grid. BritNed had contingent liabilities of EUR 2 million (2022: EUR 1 million) mainly related to comfort letters issued. In 2023 EUR 142 million dividend was received from BritNed (2022: EUR 88 million).

TenneT Holding B.V. has, together with the other shareholder, National Grid Holding One plc, provided a parent company guarantee on the liabilities of BritNed.

NOKA

NordLink is an interconnector between Norway and Germany jointly owned by Statnett SF, TenneT and KfW IPEX-Bank GmbH (KfW) to establish an interconnector between Norway and Germany under the project name 'NordLink'. Ownership of the interconnector is equally split, with TenneT and KfW owning the southern part through NOKA, a jointly owned company and Statnett owning the northern part. In 2022 the main activity of NOKA was operating the southern part of the interconnector. Operating costs and trading revenue are shared equally between NOKA and Statnett. NOKA is per 31 December 2023 part of assets classified as held for sale and discontinued operations (relate to note 2).

At 31 December, NOKA had contingent liabilities of EUR 2 million (2022: EUR 3 million) mainly related to purchase obligations. During 2023 TenneT has withdrawn EUR 34 million from NOKA's capital (2022: EUR 32 million).

OTC

OTC is a holding company and holds majority interests in four separate asset companies: Colonne B.V., Mobile Radio Networks Vehicle B.V. (MRNV), OTC Networks B.V. and OTC II B.V. These companies mainly own infrastructure assets specifically designed for terrestrial communications. OTC had no contingent liabilities as at 31 December 2023 (2022: nil). We received EUR 4 million dividend from OTC in 2023 (2022: nil). OTC is per 31 December 2023 part of assets classified as held for sale (refer to note 2) due to the possible merger with NOVEC B.V. and the possible sale of the merged entity afterwards.

Other

None of our joint ventures are permitted to distribute profits without the consent from all shareholders or partners. We received nil from other interests in joint ventures (2022: nil).

Other interests in joint ventures amounted EUR 4 million at 31 December 2023 (2022: EUR 2 million).

Associates

At 31 December 2023 our substantial investments in associates consisted of a 34% interest in Holding des Gestionaires de Réseaux de Transport d'Electricité S.A.S. (HGRT). In addition, the Group holds four immaterial investments in Energie Data Services Nederland B.V. (EDSN) (12.5%), WL Winet B.V. (40%), Beheer Afsprakenstelsel B.V. (BAS) (25%) and TSCNET Services GmbH (TSC) (12.5%). Both TenneT TSO B.V. and TenneT Germany has a share of 6.25%. The Group's share in result (which is equal to other and total comprehensive income) of these immaterial associates amounted to nil in 2023 (2022: nil). The German share in TSC and WL Winet B.V. are at 31 December 2023 part of assets classified as held for sale.

Summarised financial information in respect of material associates and reconciliation with their respective carrying amounts, of the investment in the consolidated financial statements is as follows:

	2023	2022
	HGRT	HGRT
Statement of financial position (EUR million)		
Non-current assets	91	91
Current assets	1	1
Non-current liabilities	-	-
Current liabilities	-	-
Equity	92	92
<i>Ownership TenneT</i>	34%	34%
Carrying amount of the investment	31	31

	2023	2022
	HGRT	HGRT
Statement of income (EUR million)		
Revenue	-	-
Depreciation and amortisation	-	-
Other costs	-	-
Operating result	-	-
Finance income and expenses	13	13
Income tax expense	-	-
Result for the year*	13	13
<i>Ownership TenneT</i>	34%	34%
Group's share in result	4	4

* Result for the year is equal to total and other comprehensive income.

HGRT

The legal seat of HGRT is in Paris, France. HGRT holds a 49% stake in EPEX. EPEX is the exchange for the power spot markets for the 'North West Europe' region and the United Kingdom. At 31 December 2023, HGRT had no contingent liabilities outstanding (2022: nil). In 2023 EUR 4 million dividend was received (2022: EUR 4 million).

Other

Our interest in other associates amounted EUR 1 million at 31 December 2023 (2022: EUR 5 million). From other associates we received EUR 1.5 million dividend in 2023 (2022: nil).

① Accounting policy

A joint venture is an arrangement whereby the parties in the arrangement have joint control over the net assets of the joint arrangement.

Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. An associate is an entity in which we have significant influence, but no control. Significant influence is the power to participate in the financial and operating policy decisions of the investor.

Investments in joint ventures and associates are accounted for using the equity method. Under the equity method, the investment in the joint venture or associate is initially recognised at cost. The carrying amount of the investment is adjusted to recognise changes in the Group's share of net assets of the investment since the acquisition date. Goodwill relating to the associate is included in the carrying amount of the investment and is neither amortised nor individually tested for impairment.

The statement of income reflects our share in the results of operations of investments. Any change in other comprehensive income of these investments is presented as part of the other comprehensive income. In addition, when there is a change recognised directly in the equity of the investment, our share of any change is recognised in the statement of changes in equity. Unrealised gains and losses resulting from transactions between us and any investment are eliminated to the extent of the interest in such investment. When an associate or joint venture distributes dividend to us in excess of our carrying amount, a liability is recognised if TenneT:

- is obliged to refund the dividend;
- has incurred a legal or constructive obligation; or
- made payments on behalf of the associate.

In the absence of such obligations, the excess in net result for the period is recognised. When the associate or joint venture subsequently generates results, this is only recognised if and to the extent they exceed the excess cash distributions recognised in net results plus any previously unrecognised losses.

After application of the equity method, we determine whether it is necessary to recognise an impairment loss on our investment in the joint venture or associate. At each reporting date, we determine whether there is objective evidence that the investment is impaired. If such evidence exists, the amount of impairment is calculated as the excess of the carrying value of the investment over its recoverable amount and recognised in the statement of income.

Upon loss of significant influence over the joint venture/associate, any retained investment is valued at fair value. Any difference between the carrying amount of the investment upon loss of significant influence and the fair value of the retained investment and proceeds from disposal is recognised in the statement of income.

15 Other financial assets

(EUR million)	2023	2022
Fees for credit facilities available	2	3
Financial assets through profit or loss	15	15
Other	7	26
Total	24	44

Financial assets through profit and loss

Financial assets through profit and loss interests includes investments in Westley Fund 3 and 4, located in Menlo Park, California, USA, with fair value of EUR 7 million (2022: EUR 10 million) and in Set Ventures 2, 3 and 4 located in Amsterdam, for a total fair value of EUR 8 million (2022: EUR 5 million). We contributed EUR 2 million in capital for these minorities (2022: EUR 3 million). We have recognised EUR 2 million (2022: nil) fair value loss.

Other financial assets

Per 31 December 2022 the position other mainly relates to pension assets. Per 31 December 2023 amounting to EUR 14 million is part of assets classified as held for sale (relate to note 2).

① Accounting policy

Please refer to note 30.

16 Inventory

Inventory primarily composes of strategic stock. The allowance for inventory is EUR 3 million (2022: EUR 8 million). The fair value of inventory was not materially different from the carrying value. Per 31 December 2023 amounting to EUR 138 million is part of assets classified as held for sale. Per 31 December 2023 the allowance for inventory part of assets classified as held for sale amounting to EUR 3 million (relate to note 2).

① Accounting policies

Inventory is stated at the lower of cost and net realisable value. Cost comprises direct purchase costs and associated costs incurred in bringing inventories to their present condition and location. The net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make a sale.

17 Account- and other receivables

(EUR million)	2023	2022
Amounts to be invoiced to EEG trade debtors	-	184
EEG trade receivables	-	35
Trade receivables	201	501
Amounts to be invoiced	86	1,051
VAT receivables	-	300
Subsidies to be received	131	80
Other	34	197
Total	452	2,348

EEG trade receivables and amounts to be invoiced to EEG trade debtors

EEG receivables are part of assets classified as held for sale, per 31 December 2023 amounting to EUR 1,469 million (relate to note 2).

In accordance with the Renewable Energy Sources Act (EEG) TenneT TSO GmbH is required to purchase electricity from producers of renewable energy at fixed feed-in tariffs. Subsequently such renewable energy is sold on power exchanges at spot prices.

EEG revenues and expenses are legally required to be administrated separately and are legally designated to be equal, except for certain potential bonus amounts payable to TenneT TSO GmbH for marketing the energy on the power exchange. The EEG surcharge was set to zero by law on 1 July 2022 and abolished with effect from 1 January 2023. Since then, the promotion of renewable energies has been financed by the federal budget. TenneT TSO GmbH acts as an agent with respect to these EEG services.

EEG trade debtors and receivables consisted of the accrual of unbilled EEG levy mainly for the month December, the outstanding invoices for the EEG levy, the accrual for horizontal balancing amounts (i.e. unsettled charges to the other German TSOs) and energy trading revenues. EEG trade receivables were not at our free disposal. Please refer to note 27 for the EEG accounts payable.

Please refer to note 2 and note 18 for EEG deposits.

Trade receivables

Per 31 December 2023 EUR 361 million is part of assets classified as held for sale (relate to note 2).

At 31 December, the ageing of trade receivables was as follows:

(EUR million)	Total	Not past due	Past due		
			0-30 days	31-60 days	More than 60 days
2023	201	181	8	8	4
2022	501	453	27	13	8

Changes in the allowance for expected credit losses were as follows:

(EUR million)	2023	2022
At 1 January	28	40
Charge for the year	2	7
Utilisation of provision	-14	-19
Unused amounts reversed	-1	-
Transfer to held for sale (note 2)	-5	-
At 31 December	10	28

Per 31 December 2023 amounting to EUR 5 million is part of assets classified as held for sale (relate to note 2).

Per 31 December 2023, receivables with an initial value of EUR 8 million (2022: EUR 5 million) were fully provided for.

Amounts to be invoiced

Per 31 December 2023 amounting to EUR 1,335 million is part of assets classified as held for sale (relate to note 2).

Accounting policy

Please refer to note 30, accounting policies for financial instruments.

18 Cash, cash equivalents and bank overdrafts

Cash and cash equivalents consisted of the following items.

(EUR million)	2023			2022		
	At free disposal	Not at free disposal	Total	At free disposal	Not at free disposal	Total
Collateral securities	-	373	373	-	550	550
EEG funds	-	-	-	-	1,414	1,414
EEG deposits < 3 months	-	-	-	-	3,300	3,300
Deposits	-	-	-	300	-	300
Cash at bank	298	2	300	982	1	983
Cash and cash equivalents	298	375	673	1,282	5,265	6,547
Cash at banks and short-term deposits part of assets held for sale (note 2)	2	381	383	-	-	-
Total cash and cash equivalents used in cash flow statement	300	756	1,056	1,282	5,265	6,547

Decrease of cash not at free disposal is mainly related to EEG deposits and EEG funds which are part of assets classified as held for sale (relate to note 2).

Funds related to EEG activities have been legally separated as required by BNetzA. EEG Funds are not at the TenneT's free disposal. The same applies for funds related to KWK-G and Electricity Revenue Cap Act ('Strompreisbremse'). For further reference regarding EEG we refer to note 2 and note 17. Cash at banks carry interest at floating rates based on daily bank deposit rates.

Collateral securities are related to other financial liabilities, we refer to note 26.

The Group presents its cash flows in the consolidated statement of cash flows using the indirect method. The Group has elected to classify interest received as cash flows from investing activities and interest paid (including interest on lease liabilities) as cash flows from financing activities.

① Accounting policy

In the consolidated statement of cash flows, cash and cash equivalents include cash at bank, deposits held at call with banks and other short-term highly liquid investments with remaining maturities of three months or less and are presented net of outstanding bank overdrafts and including discontinued operations. Securities are deposits on collaterals that serve as financial security for transactions relating to auction, energy exchange and balancing responsibilities. A matching obligation is recognised towards the party that deposited the funds as collateral. Securities are stated at fair value upon receipt and subsequently at amortised cost.

19 Capital management

The primary objective of TenneT's capital structure is to ensure a sustainable financial position to absorb adverse changes in the regulatory environment and to enable us to execute our extensive investment programme which is essential for the success of the energy transition in the Netherlands. The majority of the funding for our investment programme is sourced from the debt capital markets, commercial banks and international financial institutions (e.g. the European Investment Bank).

To maintain broad access to financial markets at favourable conditions, we have defined capital management objectives, policies and processes which include:

1. to maintain a senior unsecured long-term credit rating of at least A3/A-;
2. to maintain a long-term average Funds From Operations (FFO) to Net debt based on 'underlying' financial information of at least 8.5% (with individual years of at least 8.0%);
3. to diversify the maturities of long-term funding instruments to limit refinancing risk;
4. to maintain liquidity through cash and undrawn committed credit lines covering at least our net cash requirement on a rolling 12-month forward-looking basis.

Capital consists of equity and debt.

1. Maintain a senior unsecured credit rating of at least A3/A-

As of 31 December 2023 TenneT Holding B.V. had the following senior unsecured long-term credit ratings from Standard & Poor's and Moody's Investor Service, which comply with our financial policy.

Unsecured credit rating at 31 December 2022 and 31 December 2023	Long-term rating	Short-term rating
Standard & Poor's	A- (stable outlook)	A-2
Moody's Investor Service	A3 (stable outlook)	P-2

2. Maintain a long-term average FFO/Net debt ratio based on underlying financial information of at least 8.5%

To maintain a solid financial position, we intend to maintain a long-term average FFO/Net debt ratio of at least 8.5% based on underlying financial information (see note 3), which meets the minimum requirements for an A-/A3 long-term unsecured credit rating as formulated by the credit rating agencies Standard & Poor's and Moody's Investor Service. Individual years have a FFO/Net debt of at least 8.0%.

A reconciliation of the Adjusted FFO and net debt is provided in the following table. Please refer to the chapter 'Secure a sustainable financial performance and investor rating' for detailed information about the Adjusted FFO.

Based on underlying information (EUR million)	2023	2022
Net result for the year*	1,071	671
+ amortisation, depreciation and impairments*	1,369	1,254
+ other (gains)/losses (non-cash)*	-5	38
+ result on disposal of assets (non-cash)	-	-
Total FFO	2,435	1,963
Capitalised interest on assets under construction (note 7)	-25	-12
Interest on provisions (note 7)	32	25
50% Hybrid interest (note 20)	-28	-28
Adjusted FFO	2,414	1,948
Net debt		
+ Long-term borrowings (note 22)	18,871	19,006
+ Short-term borrowings (note 22)	3,640	709
- Cash and cash equivalents at free disposal (note 18)	-300	-1,282
- To be settled in tariffs (note 3)	-3,565	-2,847
Lease liabilities (note 2 and note 11)	974	729
Net employee defined benefit liabilities (note 2)	217	174
50% Hybrid loan (note 20)	1,062	1,062
Net debt	20,899	17,551
Adjusted FFO/net debt	11.6%	11.1%

* Net result and amortisation, depreciation and impairments include both continued and discontinued operations. Reference is made to note 3.

Further reference is made to note 3 Segment information.

3. Diversify maturities of long-term funding instruments to limit refinancing risk

To minimise refinancing risk, we diversify the maturity profile of our senior debt. As of 31 December 2023, our interest bearing debt (excluding bank overdrafts) had the following annual redemption profile:

Annual redemption of debt (EUR million)

Year	Maturities	Year	Maturities	Year	Maturities	Year	Maturities	Year	Maturities
2024	3,640	2029	1,742	2034	1,843	2039	784	2044	14
2025	868	2030	782	2035	1,048	2040	784	2045	7
2026	1,973	2031	1,015	2036	628	2041	684	2046	-
2027	1,225	2032	1,182	2037	48	2042	1,724		
2028	1,282	2033	1,298	2038	40	2043	14		

4. Maintaining liquidity through cash and undrawn committed credit lines covering at least our net cash requirement on a rolling 12-month forward-looking basis

We monitor the liquidity of the Group on a rolling 12-month forward-looking basis. This means that the sum of (i) cash and cash equivalents, (ii) undrawn committed credit facilities and (iii) 12-month expected net cash flow from operating activities should be sufficient to meet the expected aggregate of scheduled debt repayments, investments in fixed assets and dividend payments over the subsequent 12 months. The 12-month liquidity requirement was met on 31 December 2023 and 31 December 2022.

20 Equity

Paid-up and called-up capital

The Company's authorised share capital amounted to EUR 500 million (2022: EUR 500 million), divided into one million shares of EUR 500 each. Of these shares, two hundred thousand shares have been issued and paid-up.

Share premium reserve

The share premium reserve consists of the capital contributions, made by the Shareholder of ordinary shares, the Dutch state represented by the Ministry of Finance. In 2022 EUR 1,230 million was received. In June 2023 TenneT received a contribution from our Shareholder of EUR 1,602 million. Given the conditions precedent, the contribution is classified as current financial liability instead of equity. Refer to note 26.

Retained earnings

Part of the retained earnings has been presented as legal reserve. For more details see note 43.

Hybrid securities

Hybrid securities are deeply subordinated securities and are, with the exception of common equity, the most junior instruments in the capital structure of the Company. The hybrid securities are undated and do not default on non-payment of coupons (unless such payment was mandatory following a resolution or payment of a dividend to common shareholders, i.e. as so called 'dividend pusher').

The holders of the hybrid securities have limited ability to influence the outcome of a bankruptcy proceeding or a restructuring outside bankruptcy. Consequently, the hybrid security holders cannot oblige TenneT to pay distributions or redeem the securities in part or in full. Payment of distributions on and redemption of the securities is at our sole discretion. As a result, the hybrid securities are classified as part of the equity attributable to the company's owners.

On 31 December 2023, TenneT had EUR 2.1 billion of green hybrid securities outstanding divided in two tranches. The first tranche consisted of EUR 1.1 billion green hybrid securities that bear an optional, cumulative coupon of 2.995%, payable at TenneT's discretion annually on 1 June of each year. At 31 December 2023, the unpaid cumulative dividend for this tranche amounted to EUR 18 million (2022: EUR 18 million), relating to the period 1 June until 31 December and payable on 1 June 2024. The second tranche consisted of EUR 1 billion green hybrid securities that bear an optional, cumulative coupon of 2.374%, payable at TenneT's discretion annually on 22 October of each year. At 31 December 2023, the unpaid cumulative dividend for this tranche amounted to EUR 7 million (2022: EUR 7 million).

Dividend distribution

In 2023 a common full-year dividend of EUR 207 million (EUR 1,035 per share) to our ordinary shareholder was distributed (2022: EUR 141 million). In agreement with the State of the Netherlands TenneT has established a dividend policy with a pay-out of 35% of the underlying profit for the year, after payments of distributions to hybrid securities holders and minority equity investors. We made aggregate distributions to the holders of hybrid securities of EUR 57 million during 2023 (2022: EUR 57 million). The appropriation of the 2023 result is at the free disposal of the General Meeting of Shareholders.

21 Non-controlling interests

The proportion of economic interests held by non-controlling interests in the Group's subsidiaries is as follows:

% Non-Controlling Interests	Country	2023	2022
TenneT Offshore 2. Beteiligungsgesellschaft mbH ('TO2')	Germany	69%	69%
TenneT Offshore 8. Beteiligungsgesellschaft mbH ('TO8')	Germany	63%	63%

The Group has the power to control TO2 and, TO8 and holds 51% of the voting rights in these entities. Movements in the non-controlling interest, to the extent material, are summarised below.

Movement schedule Non-Controlling interests (EUR million)	TO2	TO8	Total
At 1 January 2022	251	204	455
Result attributable to non-controlling interests	16	15	31
Dividends paid	-12	-8	-20
Capital repayment	-13	2	-11
At 31 December 2022	242	213	455
Result attributable to non-controlling interests	41	18	59
Dividends paid	-16	-1	-17
Capital repayment	-53	-44	-97
At 31 December 2023	214	186	400

The non-controlling interest in TO2 and TO8 are held by Copenhagen Infrastructure Partners (CIP, legal seat: Copenhagen, Denmark), which owns an economic interest of 69% for TO2 and 63% for TO8 in the adjusted (for certain regulatory effects) profits of these companies and 49% of the voting rights.

Financial information of these subsidiaries, to the extent material, is summarised below on a consolidated basis before intercompany eliminations and in conformity with our accounting principles.

Statement of financial position (EUR million)	2023		
	TO2	TO8	Total
Non-current assets	817	1,155	1,972
Current assets	153	122	275
Non-current liabilities	-594	-880	-1,474
Current liabilities	-69	-99	-168
Equity	307	298	605
Attributable to owners of the parent	93	112	205
Attributable to non-controlling interests	214	186	400

Statement of financial position (EUR million)	2022		
	TO2	TO8	Total
Non-current assets	812	1,218	2,030
Current assets	168	234	402
Non-current liabilities	-555	-906	-1,461
Current liabilities	-77	-205	-282
Equity	348	341	689
Attributable to owners of the parent	106	128	234
Attributable to non-controlling interests	242	213	455

Statement of income (EUR million)	2023		
	TO2	TO8	Total
Revenue	222	222	444
Depreciation and amortisation	-78	-100	-178
Other expenses	-52	-62	-114
Operating result	92	60	152
Finance income and expenses	-8	-18	-26
Income tax expense	-25	-13	-38
Result from discontinuing operations for the year*	59	29	88
Attributable to owners of the parent	18	11	29
Attributable to non-controlling interests	41	18	59

Statement of income (EUR million)	2022		
	TO2	TO8	Total
Revenue	208	250	458
Depreciation and amortisation	-80	-102	-182
Other expenses	-86	-95	-181
Operating result	42	53	95
Finance income and expenses	-11	-18	-29
Income tax expense	-10	-10	-20
Result from discontinuing operations for the year*	21	25	46
Attributable to owners of the parent	5	10	15
Attributable to non-controlling interests	16	15	31

(EUR million)	2023		
	TO2	TO8	Total
Net cash flows from operating activities	150	107	257
Net cash flows used in investing activities	3	6	9
Net cash flows from financing activities	-153	-113	-266
Change in cash and cash equivalents	-	-	-

(EUR million)	2022		
	TO2	TO8	Total
Net cash flows from operating activities	68	75	143
Net cash flows used in investing activities	-12	-16	-28
Net cash flows from financing activities	-56	-59	-115
Change in cash and cash equivalents	-	-	-

22 Borrowings

(EUR million)	Effective interest rate	Maturity	Redemption schedule	2023	2022
0.75% green bond 2017 EUR 500 million	0.87%	Jun-25	At maturity	499	499
1.000% green bond 2016 EUR 500 million	1.04%	Jun-26	At maturity	499	499
1.75% green bond 2015 EUR 500 million	1.84%	Jun-27	At maturity	499	498
1.375% green bond 2018 EUR 500 million	1.50%	Jun-28	At maturity	497	497
1.375% green bond 2017 EUR 500 million	1.42%	Jun-29	At maturity	499	499
0.875% green bond 2019 EUR 500 million	0.99%	Jun-30	At maturity	497	496
4.750% bond 2010 EUR 200 million	4.98%	Jun-30	At maturity	198	197
1.250% green bond 2016 EUR 500 million	1.36%	Oct-33	At maturity	495	495
2.000% green bond 2018 EUR 750 million	2.05%	Jun-34	At maturity	747	746
1.875% green bond 2016 EUR 500 million	2.00%	Jun-36	At maturity	494	493
1.500% green bond 2019 EUR 750 million	1.60%	Jun-39	At maturity	741	740
0.125% green bond 2020 EUR 600 million	0.21%	Nov-32	At maturity	596	595
0.500% green bond 2020 EUR 750 million	0.54%	Nov-40	At maturity	745	744
0.125% green bond 2021 EUR 650 million	0.17%	Dec-27	At maturity	649	648
0.500% green bond 2021 EUR 500 million	0.61%	Jun-31	At maturity	496	496
0.875% green bond 2021 EUR 1,000 million	0.93%	Jun-35	At maturity	994	994
1.125% green bond 2021 EUR 650 million	1.17%	Jun-41	At maturity	646	646
1.625% green bond 2022 EUR 1,250 million	1.79%	Nov-26	At maturity	1,244	1,243
2.125% green bond 2022 EUR 1,000 million	2.24%	Nov-29	At maturity	994	993
2.375% green bond 2022 EUR 750 million	2.51%	May-33	At maturity	742	742
2.750% green bond 2022 EUR 850 million	2.90%	May-42	At maturity	835	834
3.875% green bond 2022 EUR 650 million	3.94%	Oct-28	At maturity	648	648
4.250% green bond 2022 EUR 500 million	4.34%	Apr-32	At maturity	497	497
4.500% green bond 2022 EUR 1,000 million	4.59%	Oct-34	At maturity	994	993
4.750% green bond 2022 EUR 850 million	4.84%	Oct-42	At maturity	842	842
Non-current interest-bearing bonds				16,587	16,574
0.717% loan 2015 EUR 500 million	0.72%	2018-2032	Linear	276	310
0.766% loan 2015 EUR 150 million	0.77%	2018-2037	Linear	97	105
0.813% loan 2016 EUR 125 million	0.81%	2019-2038	Linear	88	94
0.05% loan 2020 EUR 100 million	0.05%	Sep-26	At maturity	100	100
0.436% loan 2020 EUR 350 million	0.44%	2025-2042	Linear	350	350
0.562% loan 2022 EUR 250 million	0.56%	2025-2043	Linear	250	250
Floating rate Loan 2022-2025 EUR 300 million	4.29%	Aug-25	At maturity	300	300
Non-current interest-bearing loans				1,461	1,509
0.989% green Schuldschein 2016 EUR 100 million		May-24	At maturity	-	100
1.310% green Schuldschein 2016 EUR 55 million	1.32%	May-26	At maturity	55	55
1.500% green Schuldschein 2016 EUR 50 million	1.51%	May-28	At maturity	50	50
1.750% green Schuldschein 2016 EUR 43 million	1.76%	May-31	At maturity	43	43
1.750% green Schuldschein 2016 EUR 95 million	1.76%	May-31	At maturity	95	95
2.000% green Schuldschein 2016 EUR 80 million	2.01%	May-36	At maturity	80	80
Non-current interest-bearing Schuldschein				323	423
1.61% USPP 2019 EUR 160 million	1.63%	Jan-29	At maturity	160	160
1.83% USPP 2019 EUR 295 million	1.85%	Jan-31	At maturity	295	295
2.01% USPP 2019 EUR 45 million	2.03%	Jan-34	At maturity	45	45
Total non-current interest-bearing USPP				500	500
Total non-current interest-bearing borrowings				18,871	19,006

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(EUR million)	Effective interest rate	Maturity	Redemption schedule	2023	2022
4.625% bond 2011 EUR 500 million		Feb-23	At maturity	-	500
Current interest-bearing bonds				-	500
0.989% green Schuldschein 2016 EUR 100 million	1.01%	May-24	At maturity	100	-
Current interest-bearing Schuldschein				100	-
4.44% loan 2010 EUR 140 million		Nov-23	Linear	-	11
2.74% loan 2012 EUR 150 million		Sep-23	At maturity	-	150
0.72% loan 2015 EUR 500 million	0.72%	Oct-24	Linear	34	34
0.77% loan 2015 EUR 150 million	0.77%	Apr-24	Linear	8	8
0.813% loan 2016 EUR 125 million	0.81%	Oct-24	Linear	6	6
Cash loans	4.04%	Jan-24 - Mar-24	At maturity	540	-
Commercial papers	4.03%	Jan-24 - Mar-24	At maturity	2,372	-
Borrowings under committed bilateral bank credit facilities	4.21%	Jan-24	At maturity	380	-
Borrowings under uncommitted bilateral bank credit facilities	4.63%	Jan-24	At maturity	200	-
Current interest-bearing loans				3,540	209
Total current interest-bearing borrowings				3,640	709
Total borrowings				22,511	19,715

TenneT has developed a [Green Financing Framework](#) to finance its renewable energy activities. The Green Financing Framework is aligned to the 2021 ICMA Green Bond Principles (GBP) and the 2021 LMA Green Loan Principles (GLP) and addresses their four pillars; Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting. Under this framework we have issued across different formats (senior bonds, hybrid bonds, US Private Placement and Schuldschein). US Private Placement is an issuance on the US private placement market and Green Schuldschein is a type of privately placed German debt.

Changes in borrowings arising from financing activities are as follows:

(EUR million)	(Non) - current interest-bearing bonds	(Non) -current interest-bearing loans	(Non)-current interest-bearing Schuldschein	Non-current interest-bearing USPP	Total
At 1 January 2022	10,776	1,930	500	499	13,705
Cash inflow from new borrowings	6,787	550	-	-	7,337
Cash outflow from redemptions	-500	-762	-77	-	-1,339
Amortisation (non-cash)	11	-	-	1	12
At 31 December 2022	17,074	1,718	423	500	19,715
Cash inflow from new borrowings	-	3,787	-	-	3,787
Cash outflow from redemptions	-500	-504	-	-	-1,004
Amortisation (non-cash)	13	-	-	-	13
At 31 December 2023	16,587	5,001	423	500	22,511

TenneT has a Revolving Credit Facility (RCF) of EUR 3.3 billion at 31 December 2023 (available till November 2026). At 31 December 2023, this facility was undrawn. Furthermore, TenneT has also available EUR 700 million of undrawn long-term loan commitments from the EIB at 31 December 2023.

In May 2023, a term facility agreement of EUR 8 billion with a tenor of 2.5 years was reached. The facility is undrawn at 31 December 2023.

In addition, TenneT has EUR 1.75 billion of committed bilateral RCF's (EUR 1.37 billion undrawn) and uncommitted bank facilities of EUR 0.65 billion (EUR 0.45 billion undrawn) at its disposal at 31 December 2023.

At 12 January 2024, TenneT and the Dutch state have made arrangements regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress.

The amount of borrowing costs (including fair value adjustment) capitalised was minus EUR 116 million, this is due to increased interest rates leading to lower fair value for bonds (2022: EUR 126 million).

For more information about the fair value see note 29.

① Accounting policy

Refer to note 30, accounting policies for financial instruments.

23 Contract liabilities

This position fully relates to investment contributions.

(EUR million)	2023	2022
At 1 January	548	430
Addition	94	131
Amortisation	-15	-13
Transfer to held for sale (note 2)	-85	-
At 31 December	542	548

(EUR million)	2023	2022
< 1 year	12	17
1-5 years	49	54
> 5 years	481	477
Total	542	548

Additions in contract liabilities mainly relate to new grid connections from clients that will be connected to our grid and have to be paid by the customer.

① Accounting policy

Contract liabilities are recognised when payments are made, or the payments are due (whichever is earlier) before a related performance obligation is satisfied. Contract liabilities are recognised in accordance with the related contract. At initial recognition, contributions received from third parties are measured at transaction price, presented as contract liabilities ('investment contributions') and are subsequently recognised as revenue over the related asset's useful life.

24 Provisions

(EUR million)	2023			2022		
	Current	Non-current	Total	Current	Non-current	Total
Environmental and decommissioning	2	465	467	7	1,193	1,200
Other	52	25	77	70	42	112
Total	54	490	544	77	1,235	1,312

(EUR million)	Environmental management and decommissioning	Other	Total
At 1 January 2022	1,378	84	1,462
Addition	140	55	195
Utilisation	-4	-8	-12
Changes in estimations	-338	-9	-347
Unused amounts reversed	-	-11	-11
Imputed interest	24	1	25
At 31 December 2022	1,200	112	1,312
Addition	102	92	194
Utilisation	-4	-43	-47
Changes in estimations	381	4	385
Unused amounts reversed	-26	-12	-38
Imputed interest	31	-1	30
Transfer to held for sale (note 2)	-1,217	-75	-1,292
At 31 December 2023	467	77	544

Provisions for environmental management and decommissioning

Provisions for environmental management and decommissioning serve to cover future obligations in relation to high-voltage connections, underground cables and offshore platforms, including decommissioning costs. Asset retirement obligations are included for the legal and constructive obligations in relation to all our offshore interconnectors and offshore assets, consisting of offshore platforms and (subsea) cables. In 2023 EUR 102 million was added (2022: EUR 140 million) for future decommissioning costs for projects constructed during 2023. Changes in estimates related to the provision for decommissioning resulted in an increase of EUR 381 million (2022: release of EUR 338 million), mainly due to changes in the used discount rate (increase of EUR 51 million), used inflation rate (decrease of EUR 17 million) and further due to changes in underlying assumptions and applicable price levels and extended useful lifetimes (increase of EUR 347 million). The changes in estimates were not recognised through the statement of income. There was no decommissioning of substations in 2023 or 2022. In line with current regulation and permits, the first decommissioning of offshore platforms and linked grid connections is expected to be finalised in 2046.

Other provisions

The majority of other provisions relate to claims related to construction contracts and planning damage where the estimated additional payments are capitalised.

On 2 September 2022 a short circuit occurred on the newly built substation Dronten and led to a chain of events that caused damage to various parties. For the estimated costs we have recognised in 2022 a current provision which is recognised through the statement of income.

Furthermore this provision is related to long-term service bonuses.

Key estimates and assumptions

The estimated decommissioning provision involves:

1. Decommissioning costs; and
2. Assessing the expected remaining useful life of relevant assets.

The main uncertainties related to the decommissioning costs are the removal method (currently assuming reverse installation), the uncertainties around equipment and vessel availability, and market rates at expected time of decommissioning. At 31 December 2023, updated benchmark information was available, due to updated assumptions, new offshore platforms and offshore cables and updated market information. Decommissioning costs are provided for at the present value of expected costs to settle the obligation. The useful life of the offshore platforms and linked grid connections is estimated at 20 till 35 years and have been extended compared to previous year due to reassessment of the useful lives (2022: 20 till 30 years). For offshore interconnectors the useful life is estimated at 40 years. This provision assumed a discount rate between 2.476% and 2.545% was applied for other provisions (2022: between 2.737% and 2.942%) and an inflation rate between 2.328% and 2.443% (2022: between 2.594% and 2.624%). A change in the discount rate of 1 percent point would have a maximum impact of EUR 105 million on the asset value and liability value.

A discount rate of 3.0% was applied for other provisions (2022: 2.7%). A change in discount rate of 1 percent point would have a maximum impact of EUR 4 million on the related book value.

The estimated number of risks associated with delays and interruptions concerning the Group's offshore activities is based on the number of offshore grid connections and the compensation payable to the operators of offshore grid connections.

We are of the opinion that the recorded provisions reflect the best estimate of the probable outflow of resources. However, uncertainty about the assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of these provisions in future periods.

Due to the business TenneT operates in and TenneT's legal structure, TenneT faces several contingent liabilities. In general, the following items are recognised as contingent liabilities at TenneT:

- Possible impact of the Dutch regulatory frameworks on the TenneT's business financial conditions and net income;
- Operational risks and risks related to material projects;
- Impact of environmental issues;
- Risks relating to the legal structure of TenneT;
- Risks relating to the financing of TenneT;
- Factors which are material for the purpose of assessing market risks.

Uncertainties relating to contingent liabilities make a reliable estimation of the financial impact impossible. For further contingent liabilities we refer to note 31.

Accounting policy

Provisions are recognised when there is (i) a legal or constructive obligation as a result of past events, (ii) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and (iii) when the amount can be reliably estimated. Provisions are measured at the present value of estimated cash flows to settle obligations, based on expected price levels. Cash flows are discounted at a pre-tax rate that reflects the risks specific to the liability. The unwinding of interest components associated with provisions is recognised in the statement of income as a finance cost.

Estimated future costs are reviewed annually and adjusted as appropriate. Changes in estimated future costs and discount rates for decommissioning costs are recognised as changes in estimations and recorded in tangible fixed assets. All other provisions changes in estimated future costs and discount rates are recognised in the statement of income.

25 Net employee defined benefit liabilities

Net employee defined benefit liabilities are part of liabilities held for sale (relate to note 2).

Pension plans Germany

We have defined benefit plans for the majority of our German personnel. Said personnel are mainly employed based on the collective labour agreement of 'Tarifgruppe Energie' and thus enjoy benefits in the form of old-age, disability and surviving dependents' pensions. The large majority of the benefit obligations are based on pension schemes that define annual pension claims based on respective employees' pensionable income of a particular year. Furthermore, each employee is allowed to defer a certain amount of his compensation to raise his pension claim within defined bounds.

The Group contributes to two post-employment defined benefit plans in Germany, pursuant to a works council agreement called 'Betriebliche Alterssicherung' (hereafter referred to as 'pension scheme 2001') and a works council agreement called 'Beitragsplan' (hereafter referred to as 'pension scheme 2008'), as well as to a small number of individual pension commitments. The pension obligations related to these plans are partly covered by assets held in two Contractual Trust Arrangements (CTA) administrated by 'Helaba Pension Trust e.V.' (Helaba). According to German law, TenneT remains ultimately liable for fulfilling these pension obligations.

Pension scheme 2001

This scheme covers employees who started their employment with TenneT Germany on or before 31 December 2007 (or later if the individual employment contract was agreed on or before 1 April 2008). The scheme became effective on 1 January 2001 and absorbed older plans at the time. As part of the transition in 2001 to the new plan, employees were guaranteed a vested pension claim based on the old plan for their years of service prior to the transition date. The plan offers benefits in the form of old-age, disability and surviving dependents' pensions and is composed of an employer-funded basic level based on the respective employee's yearly pensionable income, an employer-funded top-up level based on the respective company's performance and an employee-funded supplementary level which allows employees to increase their pension entitlement through deferred compensation. Yearly fixed pension claims are calculated with a fixed internal interest rate that sum up to the total earned pension benefits of the respective employee.

Pension scheme 2008

This scheme covers employees who started their employment with TenneT Germany after 31 December 2007 (unless the individual employment contract was agreed before 1 April 2008, in which case the pension scheme 2001 applies). This scheme offers benefits in the form of old-age, disability and surviving dependents' pensions.

Pension cost is composed on the employer-funded basic level based on the respective employee's yearly pensionable income, an employer funded top-up level based on the respective company's performance and an employee-funded supplementary level which allows employees to increase their pension entitlement through deferred compensation. If the employee contribution to the supplementary level reaches a certain level, the company pays an additional contribution of one-third of the respective basic level contribution.

Annually, for each year a contribution to the pension claims is increased with an interest rate that is recalculated based on the weighted average current yield of German Federal Government Bonds (Bundesanleihen), with an effective floor of 3.0% and with different maturities (10, 20 and 30 years) reflecting the average duration of the plan. The annual pension claim contributions for all years of service sum up to the total earned pension benefits of the respective employee.

Differences between the plans are limited and refer mainly to the way internal interest rates and the pensionable income are determined. Therefore, the disclosure in the notes below comprises the combined plans.

The funded status of the plans and the amounts recognised in the statement of financial position at 31 December were as follows:

(EUR million)	2023	2022
Defined benefit obligation	314	265
Fair value of plan assets	-109	-103
Funded status	205	162
Benefit asset included in other financial assets	14	14
Defined benefit liability	219	176

The defined benefit liabilities at 31 December 2023 were as follows. The short-term part of the benefit liability is presented as provisions, relate to note 2.

(EUR million)	2023	2022
Defined benefit liability long-term	217	174
Defined benefit liability short-term	2	2
Total defined benefit liability	219	176

Changes in the present value of the long-term defined benefit obligation ('DBO') over the year were as follows:

(EUR million)	2023	2022
Defined benefit obligation at 1 January	265	410
Current service costs	11	23
Interest costs	10	6
Contributions by plan participants	3	3
Benefits paid	-6	-5
Remeasurements on obligation	31	-172
Transfer to held for sale (note 2)	-314	-
Defined benefit obligation at 31 December	-	265

Re-measurements on obligation are mainly due to the change of the discount rate from 3.9% to 3.45%.

Changes in the fair value of plan assets at 31 December of the year were as follows:

(EUR million)	2023	2022
Fair value of plan assets at 1 January	103	113
Actual return on plan assets	6	-9
Contributions by employer	5	4
Benefits paid	-5	-5
Transfer to held for sale (note 2)	-109	-
Fair value of plan assets at 31 December	-	103

Major categories of plan assets as a percentage of the fair value of the total plan assets were as follows:

	2023	2022
Quoted in active markets:		
Equity instruments	32%	33%
Debt securities	44%	45%
Other	5%	4%
Unquoted investments:		
Debt securities	0%	0%
Real estate	13%	14%
Cash	4%	3%
Other	2%	1%

Remeasurements, including actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions, recognised in the statement of comprehensive income were as follows:

(EUR million)	2023	2022
Accumulated balance at 1 January	-14	146
Remeasurements during the year	29	-160
Accumulated balance at 31 December	15	-14

Remeasurements of the year originate from the following items:

(EUR million)	2023	2022
Remeasurements from actuarial (gains)/losses in DBO	31	-172
Exceeding return on plan assets (over net interest included in net liability)	-2	12
Accumulated balance at 31 December	29	-160
<i>Thereof:</i>		
actuarial (gains)/losses from experience	5	5
actuarial (gains)/losses from changes in actuarial assumptions	26	-177

Key estimates and assumptions

Pension obligations and pension entitlements that are known on the reporting date are valued using economic trend assumptions including, among others, salary growth rates and pension increase rates, which are intended to reflect realistic expectations, as well as variables specific to reporting dates such as discount rates. The principal assumptions used in determining the pension obligation were as follows:

	2023	2022
Discount rate	3.45%	3.90%
Future salary increases	2.50%	2.50%
Future pension increases	1.00%	1.00%

The vast majority of our pension plans include a fixed annual pension increase of 1% after retirement. For pension agreements that do not foresee this fixed increase, a future pension increase of 2.3% per year (2022: 2.3% per year) was used in the calculation of defined benefit obligations.

Assumptions regarding future mortality experience are set based on actuarial advice in accordance with published statistics and actuarial experience. An increase in each of the main assumptions would have had the followings effects:

(EUR million)	2023	2022
0.25% change of discount rate	-14	-11
0.5% change of salary increase rate	1	1
0.5% change of pension increase rate	1	1
Change of 1 year in life expectancy	8	6

The sensitivities indicated are computed based on the same methods and assumptions used to determine the present value of the defined benefit obligations and are based on variations in a single variable only. Note that the sensitivity analyses may not be representative of an actual change in the defined benefit obligation, as it is unlikely that changes in assumptions would occur in isolation.

Due to the development of plan assets and the change in (statutory) discount rates, we expect to have no obligation to contribute to plan assets in 2024. We expect the following, undiscounted, benefit payments from the plan:

(EUR million)	2023	2022
Within the next 12 months	7	7
Within 1-5 years	35	31
Within 5-10 years	57	52
More than 10 years	529	482
Total	628	572

① Accounting policy

For defined benefit plans, pension costs are determined using the projected unit credit method. Re-measurements, comprising of actuarial gains and losses, the effect of the asset ceiling (excluding net interest) and the return on plan assets (excluding net interest), are recognised in other comprehensive income in the period in which they occur. Re-measurements are not reclassified to the statement of income in subsequent periods.

Service costs comprising current service costs and, if applicable, past-service costs, gains and losses on curtailments and non-routine settlements are recognised as personnel expenses in the consolidated statement of income. Interest is calculated by applying the discount rate to the net defined benefit liability or asset and is recognised as part of the finance result in the statement of income.

Prepaid pension costs relating to defined benefit plans are capitalised only if they lead to refunds to the employer or to reductions in future contributions to the plan by the employer.

Pension plan the Netherlands

For the majority of our Dutch personnel we have a multi-employer scheme offered by ABP Pension Fund (ABP) in the Netherlands. The pension contribution rate for 2023 was 20.1% of the pensionable salary. In 2024 we expect to contribute EUR 42 million, based on 2023 number of employees, to the ABP scheme. Compared to the total participants in the ABP pension fund, our share in ABP is limited. We are not liable for any deficits in the multi-employer plan.

ABP has indicated that it is unable to provide the kind of company-specific information required by IFRS for defined-benefit pension schemes. Consequently, this scheme is treated as if it were a defined contribution scheme.

The policy funding ratio is the 12-month moving average of the nominal funding ratio. ABP's policy funding ratio at 31 December 2023 was 113.9% (2022: 118.6%) which is above the critical regulatory coverage rate level under which pensions would have to be reduced.

① Accounting policy

Payments to defined contribution plans are charged as an expense in the period to which they relate.

26 Other financial liabilities

In June 2023 TenneT received a contribution from our Shareholder of EUR 1,602 million. Given the conditions precedent, the contribution is classified as current financial liability instead of equity.

Furthermore this position consists of financial liabilities relate to shares held by Copenhagen Infrastructures in TOD3 for 67%. The movement of this liability is disclosed below. Per 31 December this part is disclosed as liabilities classified as held for sale.

The remaining short-term other financial liabilities (EUR 373 million) relate to collateral securities given by third parties to underwrite trading on energy exchanges and the auctioning of cross-border interconnection capacity. as disclosed in note 18.

(EUR million)	2023	2022
At 1 January	185	183
Profit share current year	21	22
Contribution by ordinary shareholder	1,602	-
Capital repaid	-37	-20
Transfer to held for sale (note 2)	-169	-
At 31 December	1,602	185

① Accounting policy

Please refer to note 31, accounting policies for financial instruments.

27 Account- and other payables

(EUR million)	2023	2022
EEG accounts payable	-	4,934
Accounts payable	207	368
Accruals for tangible fixed assets	-	332
Grid expenses payable	101	1,452
Interest payable	148	142
Social securities and other taxes payable	25	22
Other payables	159	239
Total	640	7,489

EEG accounts payable

EEG accounts payable are recognised as liabilities classified as held for sale, per 31 December 2023 amounting to EUR 1,741 million (refer to note 2).

Accruals for tangible fixed assets

Payables in connection with tangible fixed assets purchases are related to unbilled services and deliveries for onshore and offshore investment projects, per 31 December 2023 is EUR 588 million recognised as liabilities classified as held for sale (refer to note 2).

Interest payable

Interest payable increased due to increased borrowings. These new loans have higher interest rates, which also has impact to the increase of interest payable.

Grid expenses payable

The grid expenses payable consisted mainly of accrued expenses for redispatch measures. Grid expense payable mainly decreased due to movement to liabilities classified as held for sale, per 31 December 2023 amounting to EUR 1,846 million (refer to note 2).

Key estimates and assumptions

Accrued expenses for measures taken to restore the imbalance of the electricity grid, relate to balancing services provided by various electricity generating parties. At year-end, we record a pass-through accrual for all balancing costs. The accrual is based on actual volumes or, if not available, forecast volumes derived from models. Several assumptions are made in these models such as weather conditions, requested volumes and capacity power plant. Prices are based on underlying contracts and/or historical data.

Other payables

Other payables mainly comprised compensation payments to offshore wind farm operators (OWFs), personnel-related liabilities and accruals for which invoices had not yet been received.

Other payables mainly decreased due to reclassification to liabilities classified as held for sale, per 31 December 2023 amounting to EUR 107 million (refer to note 2).

Key estimates and assumptions

Compensation payments to OWFs are based on amounts of electricity which could not be fed into the grid. The pass-through accrual is based on a comparison of the costs incurred and the revenue generated by the offshore grid surcharge.

Accounting policy

Please refer to note 31, accounting policies for financial instruments.

28 Financial risk management

Our business activities are exposed to a number of financial risks such as interest rate risk, credit risk, liquidity risk and refinancing risk, which are described in detail in this note. Our financial risk management strategy primarily focuses on protecting liquidity, equity capital and net result in order to safeguard our ability to continue active operations while providing an adequate return to our shareholders. Our approach to managing financial risks, including a number of specific disclosures (such as a maturity analysis of contractual undiscounted financial obligations) required by accounting standards, are set out in this note. For details about regulatory risks we refer to the 'Corporate Governance' section of our Executive Board report.

Risk management related to financing activities is done by our Treasury department under policies included in the Treasury Statute approved by our Executive Board. The Treasury department's objective is to facilitate the realisation of our financial and strategic objectives from a funding and financial risk perspective. The Treasury Statute includes principles covering specific areas such as interest rate risk, liquidity risk, the use of derivatives and the investment of excess liquidity. The use of all ordinary course financial instruments is permitted, provided these are used solely to cover open positions of the Company. Any speculative use of financial instruments is explicitly not authorised.

Interest rate risk

TenneT is exposed to interest rate risk on its debt portfolio. To limit this risk, our policy is to base the majority of our loan portfolio on fixed interest rates. As of 31 December 2023, the senior debt portfolio was for more than 83% (2022: 98%) based on fixed interest rates. An increase or decrease in interest rates of 2 percentage points would result in an increase or decrease of EUR 70 million in our interest cost (2022: EUR 6 million). The increase is mainly related to the increased short-term loans compared to 31 December 2022.

Furthermore, there is a risk that interest payable on borrowings exceeds the interest compensation received by TenneT under the prevailing regulatory systems in the Netherlands. In 2022, a new regulatory period started in the Netherlands. The risk that the interest payable on borrowings exceeds the interest compensation received by TenneT is largely mitigated with the ex-post settlement of the interest rates which is part of the new regulatory period as of 2022.

Credit risk

TenneT is exposed to the risk of loss resulting from counterparties' defaulting on their commitments including failure to pay or make a delivery on a contract. Our exposure to credit risk from operating activities and treasury activities is inherent to our business activities.

Operational credit risk

In respect of our operating activities, TenneT has a credit policy in place, which takes into account the risk profiles of our counterparties. We also have policies in place to monitor the financial viability of counterparties.

In the Netherlands, TenneT is responsible for maintaining the balance between supply and demand of energy. The associated costs are covered by income from parties with balance responsibility, which are charged for any imbalances attributable to them. Any surplus is deducted from subsequent tariffs for system services. For certain situations, securities in the form of bank guarantees and collaterals are held as protection against the default risk of parties with balance responsibility. With respect to investment projects, we require counterparties to deliver bank guarantees or collaterals as a protection against defaults.

Credit risk on trade and other receivables is limited because most of our trade and other debtors have a low risk of default. Consequently, TenneT requires no material collateral as security and no insurance for credit risk. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in note 15 and note 17. The movement of the allowance for expected credit losses of trade receivables is included in note 17.

The provision rates for expected credit losses are based on groupings of various customer segments with similar loss patterns (such as customer type and arrears in payments). Any expected credit losses for financial guarantee contracts and commitment letters (if any) are also provided for. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables and other financial assets are written-off if there is no reasonable expectation of recovering the contractual cash flows. The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, TenneT may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group.

Financial credit risk

In 2023, financial credit risk arose mainly from TenneT's transactions and positions with several financial institutions. At 31 December 2023, the maximum credit risk amounted to nil (2022: EUR 3,600 million).

Counterparty risk may be defined as the risk that a party that has entered into a contract with the TenneT Group is unable to fulfil its financial obligations towards the TenneT Group. In accordance with our treasury policies, counterparty credit exposure is monitored frequently against the counterparty credit limits. Exposure per counterparty is calculated for the group as a whole (excluding the positions for EEG, KWKG and ASK). We have concentration limits in place for the group, EEG, KWKG and ASK for current account balances, when funds are placed on deposit and when financial derivatives, Money Market Loans and other products are entered into. At 31 December 2023 we had nil at our free disposal for these deposits. These deposits had a maturity of less than 3 months (2022: EUR 300 million), see note 17.

At 31 December 2023 we had nil deposits with third parties for EEG cash amounts. These were part of assets held for sale (relate to note 2) (2022: EUR 3,300 million) and no financial derivatives outstanding. As of 31 December 2023 these deposits had a maturity of more than 3 months (2022: EUR 3,300 million), please refer to note 2, note 17 and note 18.

Management does not expect any significant losses from non-performance by treasury counterparties.

Liquidity risk

Liquidity risk is defined as the risk that the Group cannot meet its short-term financial obligations. Liquidity is monitored every quarter on a rolling 12-month forward-looking basis. Our 12-month liquidity objective was met on 31 December 2023 and 31 December 2022.

The following maturity schedule presents our financial obligations on a contractual, non-discounted basis. The liquidity risk for lease liabilities, account- and other payables and other financial liabilities mainly decreased due to liabilities which per 31 December 2023 are classified as held for sale.

(EUR million)	Notes	<1 month	1 to 3 months	3 to 12 months	1 to 5 years	More than 5 years	Total
At 31 December 2023							
Account- and other payables	27	314	131	47	-	-	492
Other financial liabilities	26	373	-	1,602	-	-	1,975
Lease liabilities	11	3	2	13	46	64	128
Borrowings	22	1,611	1,918	491	6,658	15,626	26,304
Total		2,301	2,051	2,153	6,704	15,690	28,899
At 31 December 2022							
Account- and other payables	27	2,465	1,353	3,529	-	-	7,347
Other financial liabilities	26	550	-	-	-	185	735
Lease liabilities	11	13	22	115	427	162	739
Borrowings	22	5	527	543	5,566	17,213	23,854
Total		3,033	1,902	4,187	5,993	17,560	32,675

TenneT's borrowings have a diversified maturity profile, which reduces refinancing risks ([see also note 21](#)).

The EEG has a significant impact on the Group's working capital position and to prevent negative EEG bank account balances and additional short-term bridge financing, a liquidity buffer is included in the EEG levy. In accordance with EEG legislation, shortfalls are reimbursed through EEG levies and/or government contributions at the latest in the following year as regulated in a contract between the German TSOs and the German Federal Ministry for Economic Affairs and Climate Action following the abolition of the EEG surcharge in July 2022. From 1 January 2023, the EEG costs used to finance payments made to renewable energy producers are to be financed entirely from the federal budget. Nevertheless liquidity risks may arise for the four TSOs in the EEG settlement due to the current prognosis-mechanism. Interim financing to bridge shortfalls is necessary and is currently being discussed intensively with political decision-makers.

In order to reduce liquidity risk, TenneT has EUR 3.3 billion committed revolving credit facilities (RCFs) at its disposal for general corporate purposes. At 31 December 2023, this facility was undrawn. Furthermore, we had EUR 700 million of undrawn long-term loan commitments from the European Investment Bank (EIB) available at 31 December 2023 and EUR 1.75 billion committed bilateral RCFs (EUR 0.38 billion drawn at 31 December 2023). Next to that we had EUR 650 million of uncommitted bank facilities (EUR 200 million drawn at 31 December 2023).

In May 2023, a term facility agreement of EUR 8 billion with a tenor of 2.5 years was reached. The facility is undrawn at 31 December 2023.

At 12 January 2024, TenneT and the Dutch state have made arrangements regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress.

The size of our credit facilities is such that we expect that all substantial adverse financial developments and events can reasonably be expected to be accommodated and that continuation of day-to-day operations is ensured for at least 12 months. The terms and conditions of our credit facilities include negative pledge and pari passu clauses. No security interest over any of the Group's assets has been provided. All credit facilities have floating-rate interest conditions.

TenneT also has access to diversified funding sources through its medium-term note (EMTN) programme and our commercial paper (CP) programme. Both programmes significantly reduce our dependency on bank financing.

TenneT expects to meet its financial obligations for 2024 with (i) cash and cash equivalents, (ii) funds from operations, (iii) unused credit facilities, (iv) capital market transactions and (v) equity contributions from our shareholder. We expect to meet our financial obligations for the subsequent years through various capital market transactions and equity contributions and intend to manage future refinancing risks by spreading the tenors of new financing arrangements.

Equity risk

There is a risk of a lack of access to equity on a sustainable basis. This risk reflects the inability to raise additional equity in a timely fashion in case of unexpectedly large increases in our investment portfolio or negative regulatory developments. Actions taken in order to mitigate this risk are: (i) an active financing strategy to create and maintain an optimal capital structure as well as to diversify funding sources and manage financial risks, (ii) a proactive approach of potential investors and active discussion with our shareholder to contribute additional equity (which effected in EUR capital contribution of 1.21 billion for period 2022, see note 20 and a conditional contribution of EUR 1.62 billion see note 26) and (iii) lobbying activities to ensure that regulatory frameworks remain adequate to safeguard regulators income and returns to investors.

Commodity price risk

Energy purchase contracts for the forward purchase of electricity that are used to satisfy physical delivery requirements to customers, or for energy that the Group uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. Disclosure of commitments under such contracts is made in note 30.

Energy purchase contracts are considered to comprise two components, being a forward purchase of power at spot prices, and a forward purchase of environmental certificates at a variable price (being the contract price less the spot power price). With respect to our current contracts, neither of these components meets the requirement to be accounted for as a derivative. As currently no liquid market for environmental certificates exists, this component meets the expected purchase or usage exemption of IFRS 9. We expect to enter into an increasing number of these contracts, in order to meet our compliance requirements in the short to medium term. It is possible that in future, if and when liquid markets develop, and to the extent that we are in receipt of environmental certificates in excess of our required levels, this exemption may cease to apply, and we may be required to account for forward purchase commitments for environmental certificates as derivatives at fair value through profit and loss.

29 Fair values

The table below provides an overview of the carrying value and fair value of financial instruments, including IFRS treatment and the level in the valuation hierarchy. Instruments are measured at fair value.

(EUR million)	Notes	Carrying amount		Fair value		Hierarchy
		2023	2022	2023	2022	
Financial assets						
<i>Other financial assets:</i>						
- Financial assets through profit and loss	15	14	15	14	15	Level 3
Total		14	15	14	15	
Financial liabilities						
<i>Borrowings:</i>						
- Borrowings – bonds	22	16,585	17,074	16,025	14,615	Level 1
- Borrowings – other	22	5,923	2,641	5,643	2,221	Level 2
Total		22,508	19,715	21,668	16,836	

At 31 December 2023, no instruments carried at fair value were held (2022: nil). Furthermore, we concluded that the fair value of the loans and receivables, cash and cash equivalents, account- and other payables and other financial liabilities approximate their carrying amounts at year end 2023, due to the short-term maturities of these instruments.

The following hierarchy by valuation technique was used to calculate the fair value of assets and liabilities:

- Level 1: Measurement based on quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Measurement based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Measurement based on inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The fair value of the level 2 borrowings was based on discounted cash flows. A change in the assumptions used to calculate the fair value should not result in a significantly different outcome. There were no transfers between the fair value hierarchy levels during 2023 or 2022.

The fair value of the level 3 financial assets through profit and loss was based on information received by the investment funds.

30 ⓘ Accounting policies for financial instruments

Financial assets

All financial assets are recognised initially at fair value, net of directly attributable transaction cost.

After initial recognition financial assets are measured at amortised cost, fair value through other comprehensive income (OCI) and fair value through profit or loss. Financial investments in investment funds (see note 14) are classified as fair value through profit or loss. All other of TenneT's financial assets are classified as amortised cost, because the following two conditions are met:

- The financial assets are held within a business model with the objective to hold financial assets in order to collect contractual cash flows, and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest (EIR) method and are subject to impairment.

The Group recognises an allowance for expected credit losses (ECLs) for financial assets. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date.

Financial liabilities

All financial liabilities are recognised initially at fair value and, in case of loans, borrowings and payables, net of directly attributable transaction costs. The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts.

After initial recognition at fair value, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in the statement of income when the liabilities are derecognised as well as through the EIR amortisation process. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance expense in the statement of income.

31 Contingencies and commitments

Off-balance sheet rights and related obligations for continuing operations consist of the following categories:

(EUR million)	2023	2022
Investment related off-balance items		
<i>Off-balance sheet rights</i>		
Bank guarantees received and other items	1,918	1,907
Comfort letters received	-	1,620
Total	1,918	3,527
<i>Off-balance commitments</i>		
Capital commitments	11,333	9,923
Comfort letters issued	-	797
Total	11,333	10,720
Other off-balance items		
<i>Other off-balance obligations</i>		
Grid-related commitments	46	914
Other off-balance sheet commitments	55	74
Total	101	988

The comparative figures include both continued and discontinued operations. Comparative figures of discontinued operations are also included in note 2.

The expected cash flows in respect of capital commitments equal the amounts in the above table. For comfort letters issued, no cash flows are expected.

Bank guarantees received and other items

The majority is related to bank guarantees received included guarantees for investment projects.

Comfort letters received

Comfort letters received decreased due to assets classified as held for sale (relate to note 2).

Capital commitments

Capital commitments increased due to investments in our 2GW Program. In 2022 for continued operations amounted to EUR 1,860 million. Capital commitments of discontinued operations are part assets classified as held for sale (relate to note 2).

Capital commitments are commitments entered into with regard to the purchase of tangible fixed assets. Approximately EUR 5.3 billion of capital commitments were payable within 12 months, at 31 December 2023 (2022: EUR 4.4 billion).

Comfort letters issued

Comfort letters issued are part of liabilities classified as held for sale (relate to note 2).

Grid related commitments

Grid related commitments mainly decreased due to assets classified as held for sale (relate to note 2).

Grid-related commitments mainly consist of the outstanding value of purchase orders related to grid expenses to which we are committed to, amounting to EUR 46 million (2022: EUR 86 million).

Other

Other off-balance sheet commitments mainly consisted of:

- Compensation claimed by several parties for the delay or non-availability of the offshore grid connection. The related legal proceedings are still pending. If and to the extent the claims are (partly) justified and the payments resulting therefrom could not be passed through to the end customers, the binding rulings may have a negative impact on the financial position;
- Capital commitments to minority participating interests;

For these items, it is not practically possible to determine the financial effect and possible timing of cash outflows and cash inflows.

Various other off-balance sheet commitments and contingencies as well as other off-balance sheet rights existed as of 31 December 2023 but were immaterial from a disclosure perspective. The majority of these claims related to (i) construction contracts and planning damage where additional payments would be capitalised, (ii) claims relating to compensation for delays and interruptions where any compensation would be pass-through for TenneT or (iii) claims relating to refunds of transmission services, which would be compensated in future tariffs. In the unlikely event that these claims would prevail in court, this could have a material impact on the Company's financial situation.

Insurance captive

At 23 October 2023 TenneT Holding B.V. has established TenneT Reinsurance N.V. This entity will reinsure our Dutch offshore activities as of mid 2024. Future capital contributions are related to restricted equity need for Solvency II requirements.

Environmental obligations

The Group is exposed to risks regarding environmental obligations arising from past activities. For example, a number of sites have to be decontaminated and restored to their original condition before being handed back at the end of the contractual period. Under current legislation, environmental plans and any other measures to be adopted have to be agreed with local, regional and national authorities as appropriate. As soon as such plans are approved or other legal obligations arise, a provision is formed based on the most reliable estimate possible of future expenses. TenneT is of the opinion that the currently recognised provisions are adequate, based on information currently available.

32 Related parties

Note 33 provides an overview of legal entities included in the consolidated financial statements.

TenneT has entered into transactions with the following related parties:

- The shareholder, state of the Netherlands: TenneT Holding B.V. is controlled by the Dutch state, which owns 100% of the Company's ordinary shares (refer to note 20);
- Joint ventures NOKA, OTC, BritNed and VertiCer (refer to note 14);
- Associate HGRT (refer to note 14);
- Members of the Executive Board and Supervisory Board of TenneT Holding B.V. (refer to note 5).

33 Consolidated subsidiaries

The following legal entities were included in the consolidation of TenneT Holding B.V.:

Subsidiary	Legal seat	Country	Voting interest		Economic interest		
			2023	2022	2023	2022	
Direct subsidiaries							
NLink International B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
Relined B.V.	Utrecht	Netherlands	100%	100%	100%	100%	
TenneT Duitsland Coöperatief U.A.	Arnhem	Netherlands	100%	100%	100%	100%	*
TenneT Green B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
TenneT Orange B.V.	Arnhem	Netherlands	100%	100%	100%	100%	
TenneT Reinsurance N.V.	Arnhem	Netherlands	100%	0%	100%	0%	
TenneT TSO B.V.	Arnhem	Netherlands	100%	100%	100%	100%	
TenneT TSO Duitsland B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
<i>Direct subsidiaries part of assets and liabilities held for sale as per 31 December 2023</i>							
NOVEC B.V.	The Hague	Netherlands	100%	100%	100%	100%	
Indirect subsidiaries							
B.V. Transportnet Zuid-Holland	Voorburg	Netherlands	100%	100%	100%	100%	*
CertiQ B.V.	Arnhem	Netherlands	0%	100%	0%	100%	***
Duvekot Rentmeesters B.V.	Bathmen	Netherlands	100%	100%	100%	100%	
Nadine Netwerk B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
Nederlands-Duitse Internet Exchange B.V.	Enschede	Netherlands	100%	0%	100%	0%	
Saranne B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
Stichting Beheer Doelgelden Landelijk Hoogspanning-snet	Arnhem	Netherlands	N/A	N/A	N/A	N/A	
Relined GmbH	Emsbüren	Germany	100%	100%	100%	100%	
TransTenneT B.V.	Arnhem	Netherlands	100%	100%	100%	100%	*
<i>Indirect subsidiaries part of assets and liabilities held for sale as per 31 December 2023</i>							
Omroepmasten B.V.	Vianen	Netherlands	100%	100%	100%	100%	
DC Netz DolWin4 GmbH	Bayreuth	Germany	100%	100%	100%	100%	
DC Netz HelWin1 GmbH	Bayreuth	Germany	100%	100%	100%	100%	
DC Netz SylWin2 GmbH	Bayreuth	Germany	100%	100%	100%	100%	
Globalways GmbH	Stuttgart	Germany	0%	100%	0%	100%	
Greenet Stiftung	Bayreuth	Germany	N/A	N/A	N/A	N/A	
NOVEC GmbH	Emsbüren	Germany	0%	100%	0%	100%	
TenneT GmbH & Co. KG	Bayreuth	Germany	100%	100%	100%	100%	**
TenneT Offshore 1. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	31%	31%	
TenneT Offshore 2. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	31%	31%	
TenneT Offshore 8. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	37%	37%	
TenneT Offshore 9. Beteiligungsgesellschaft mbH	Bayreuth	Germany	51%	51%	37%	37%	
TenneT Offshore Dolwin3 Beteiligungs GmbH & Co. KG	Bayreuth	Germany	51%	51%	30%	30%	**
TenneT Offshore Dolwin3 GmbH & Co. KG	Bayreuth	Germany	51%	51%	30%	30%	
TenneT Offshore Dolwin3 Verwaltungs GmbH	Bayreuth	Germany	51%	51%	33%	33%	
TenneT Offshore GmbH	Bayreuth	Germany	100%	100%	100%	100%	
TenneT TSO GmbH	Bayreuth	Germany	100%	100%	100%	100%	
TenneT Verwaltungs GmbH	Bayreuth	Germany	100%	100%	100%	100%	

* For these companies TenneT has issued a declaration of liability as referred to in Part 9 of Book 2 of the Dutch Civil Code, article 403.

** This company, which has been consolidated in these financial statements, has opted for the exemption of Section 264b of the German Commercial Code.

*** Per 31 December 2022 CertiQ B.V. merged with Vertogas B.V. into VertiCer B.V. which is a joint venture per the same date, reference is made to note 11.

As TenneT is able to exercise direct control over its management and financial and operational policies, Stichting Beheer Doelgeden Landelijk Hoogspanningsnet, a foundation which temporarily manages funds arising from the maintenance of the energy balance and auctioning of cross-border capacity by TenneT TSO B.V., is included in the consolidation.

As TenneT is able to exercise direct control over its management and financial and operational policies, Greenet Stiftung, the foundation that compensate negative impact due to construction work of TenneT in our German grid is included in the consolidation.

At 30 November 2023 NOVEC B.V. sold NOVEC GmbH to Phoenix Tower International, located in Boca Raton, FL, USA.

At 27 November 2023 Relined GmbH sold Globalways GmbH to Zayo Infrastructure Deutschland GmbH, located in Frankfurt, Germany.

At 23 October 2023 TenneT Holding B.V. has founded TenneT Reinsurance N.V. TenneT has many offshore activities. The insurance market hardened, especially for offshore risks, which results in lower limits, coverage, market capacity and higher premiums. Due to TenneT Reinsurance N.V., TenneT has access to a better market with lower insurance premiums, since part of the risk is not insured by the market, but by TenneT Reinsurance N.V. Activities will start in 2024.

34 Events after the reporting period

At 12 January 2024, TenneT and the Dutch state have made arrangements regarding a temporary shareholder loan facility of EUR 25 billion, safeguarding our planned investments in the Netherlands and Germany for 2024 and 2025. The loan facility, which will be granted at market conditions, is subject to a customary parliamentary approval process, which is currently in progress.

Company financial statements

The balance sheet is prepared on a basis before result appropriation.

Company statement of financial position

For the year ended 31 December (EUR million)

Assets	Notes	2023	2022
Non-current assets			
Investments in subsidiaries	40	10,661	8,491
Investments in associates	41	31	31
Other financial assets	42	22,299	17,412
Total non-current assets		32,991	25,934
Current assets			
Other financial assets	42	317	323
Account- and other receivables	43	5	1
Cash and cash equivalents		295	1,275
Total current assets		617	1,599
Total assets		33,608	27,533

Equity and liabilities	Notes	2023	2022
Equity			
Paid up and called-up capital		100	100
Share premium		3,020	3,020
Reserve participating interests		184	181
Retained earnings		1,617	2,799
Unappropriated result		595	-967
Equity attributable to ordinary shares		5,516	5,133
Hybrid securities		2,125	2,125
Equity attributable to owners of the company	44	7,641	7,258
Non-current liabilities			
Borrowings	45	18,871	19,006
Deferred tax liability		6	7
Total non-current liabilities		18,877	19,013
Current liabilities			
Borrowings	45	3,640	709
Financial liability	46	1,602	-
Account- and other payables	47	1,848	553
Total current liabilities		7,090	1,262
Total equity and liabilities		33,608	27,533

Company statement of income

For the year ended 31 December (EUR million)

(EUR million)	Notes	2023	2022
Revenue		-	-
Other operating expenses	37	-23	-10
Other gains/(losses)		-	-
Total operating expenses		-23	-10
Share in profit of joint ventures and associates		4	5
Operating result		-19	-5
Finance income	38	436	281
Finance expenses	39	-456	-259
Finance result		-20	22
Result before income tax		-39	17
Income tax expense		-3	-12
Result from subsidiaries	40	694	-915
Result for the year		652	-910

Notes to the company financial statements

These notes contain information about the company financial statements of TenneT Holding B.V. Details related to TenneT Holding B.V.'s financial results and position are provided, as well as a description of the specific accounting policies applied when compiling these company financial statements.

35 Company accounting policies

The company financial statements for TenneT Holding B.V. have been prepared in accordance with the provisions of Part 9 of Book 2 of the Dutch Civil Code. The same principles governing valuation and the determination of results (including the principles governing the classification of financial instruments as equity or liability) have been applied when compiling the company financial statements and the consolidated financial statements, as permitted by as permitted by Article 362 clause 8 of Part 9 of Book 2 of the Dutch Civil Code.

Expected credit loss (ECL) provisions for receivables from subsidiaries have been eliminated as intercompany positions. Changes in these ECL provisions may impact the carrying amounts of the financial assets in the company statement of the financial position due to a possible provision. This may result in a difference between the company's equity and the consolidated equity. No ECL provision was deemed necessary.

36 Personnel expenses

TenneT Holding B.V. did not employ any personnel during 2023 or 2022, and as a result did not incur any personnel expenses in those periods. Members of the Executive Board and Supervisory Board of the Company received their remuneration, as disclosed in note 5 of the consolidated financial statements, from other entities within the Group.

37 Other operating expenses

Other operating expenses mainly comprise of consultancy expenses due to advise for held for sale activities.

38 Finance income

Finance income was mainly related to the interest received on intercompany loans and other inhouse financing activities (see note 42). The intercompany agreements have terms equivalent to those that prevail in arm's length transactions.

39 Finance expenses

Finance expenses mainly related to interest on borrowings and credit facilities (2023: EUR 394 million; 2022: EUR 245 million). This increase is related to increased interest rates and increased borrowings.

40 Investments in subsidiaries

Changes in investments in subsidiaries can be broken down as follows:

(EUR million)	2023	2022
At 1 January	8,491	8,216
Share in result	694	-915
Deconsolidation	-	1
Capital contribution	1,602	1,230
Capital repayment	-42	-144
Dividends received	-64	-50
Remeasurement of defined benefit pension	-20	153
At 31 December	10,661	8,491

Investments in subsidiaries relate to the legal entities included in the consolidation as disclosed in note 33 of the consolidated financial statements.

① Accounting policies

Investments in subsidiaries are measured at net asset value. The net asset value of a participating interest is determined by valuing assets, provisions and liabilities and calculating the result using the accounting principles applied to the consolidated financial statements.

When TenneT's share of losses in an investment equals or exceeds its interest on investment, (including separately presented goodwill or any other unsecured non-current receivables, as part of the net investment), it does not recognise any further losses, unless it has incurred legal or constructive obligations or made payments on behalf of this investment. In such case, TenneT will recognise a provision.

41 Investments in associates

Investments in are related to HGRT. In 2023, TenneT's share in HGRT's result amounted to EUR 4 million (2022: EUR 4 million) and EUR 4 million (2022: EUR 4 million) dividends were received. Further reference is made to note 14 of the consolidated financial statements.

42 Other financial assets

In relation to financial assets through profit and loss reference is made to note 15 of the consolidated financial statements.

Receivables from subsidiaries mainly related to intercompany loans and cash management activities of TenneT Holding B.V. The agreed interest rate for the intercompany loans is our cost of fund rate +0.125%. These receivables were unsecured. The movement schedule is as follows:

(EUR million)	2023	2022
At 1 January	17,412	12,861
Additions	6,432	5,482
Capital contribution to minority participating interests	2	3
Repayments	-1,338	-834
Transfer to current	-207	-100
Fair value adjustment equity investments	-2	-
At 31 December	22,299	17,412

TenneT Holding B.V. had EUR 251 million (2022: EUR 325 million) of current other financial assets which were related to receivables from subsidiaries. Certain subsidiaries have guaranteed the payment to, certain creditors of TenneT Holding B.V. up to an aggregate amount of EUR 400 million (2022: EUR 400 million).

43 Account- and other receivables

Account- and other receivables mainly related to corporate income tax receivable.

44 Equity

(EUR million)	Reserve participating interests	Reserve for internally generated assets	Revaluation reserve	Total reserve participating interests
At 1 January 2022	64	88	11	163
Result NOKA and HGRT	30	-	-	30
Dividend NOKA and HGRT	-25	-	-	-25
Internally generated intangible assets	-	46	-	46
Amortisation on internally generated intangible assets	-	-23	-	-23
Depreciation revaluation tangible fixed assets	-	-	-10	-10
At 31 December 2022	69	111	1	181
Result NOKA, HGRT, VertiCer and associates	23	-	-	23
Dividend NOKA and HGRT	-39	-	-	-39
Internally generated intangible assets	-	39	-	39
Amortisation on internally generated intangible assets	-	-19	-	-19
Depreciation revaluation tangible fixed assets	-	-	-1	-1
At 31 December 2023	53	131	-	184

The statement of changes in equity and disclosures to that statement are included in the consolidated financial statements. For details on the hybrid securities see note 20.

Reserve participating interests

The revaluation reserve covers the IFRS 1 revaluation of tangible fixed assets in 2004. The reserve for participating interests relates to HGRT, NOKA, VertiCer and associates, for which TenneT does not control payment of dividends. The reserve for internally generated assets relates to software created by internal employees. In the consolidated financial statements, the revaluation reserve, the reserve for internally generated assets and the reserve for participating interests were included in retained earnings.

The reserve participating interests are not freely distributable.

Appropriation of result for the year ended 31 December 2023

The financial statements of 2022 were approved in the General Meeting held on 11 March 2023. The General Meeting determined the appropriation of result in accordance with the proposal being made to that end.

The appropriation of the 2023 result is at the free disposal of the General Meeting of Shareholders and has not been recorded in the financial statements.

45 Borrowings

Details on borrowings are included in the consolidated financial statements, see note 22.

46 Financial liabilities

In June 2023 TenneT received a contribution from our Shareholder of EUR 1,602 million. Given the conditions precedent, the contribution is classified as current financial liability instead of equity.

47 Account- and other payables

(EUR million)	2023	2022
Payables to subsidiaries	1,627	406
Interest payable	148	142
Income tax payable	70	1
Other payables	3	4
Total	1,848	553

48 Events after the reporting period

See note 34 of the consolidated financial statements.

Arnhem, 4 March 2024

Executive Board TenneT Holding B.V.

M.J.J. van Beek (Chair)

T.C. Meyerjürgens

M.C. Abbenhuis

A.C.H. Freitag

Supervisory Board TenneT Holding B.V.

A.F. van der Touw (Chair)

A.C.C. van Els

E. Kairisto

E.M. Schöne

M.R.P.M. Camps

K. Singh

TenneT Holding B.V.

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6812 AR Arnhem

The Netherlands

Postbus 718

6800 AS Arnhem

The Netherlands

Chamber of Commerce register 09083317



Other information

Profit appropriation

Profit appropriation is governed by Section 38.3 of the Articles of Association, which states the following 'To the extent that the profit is not used to make up prior losses in accordance with the provision of paragraph 2, it shall be at the free disposal of the general meeting. In the calculation of the profit amount to be distributed on every share, only the amount of the compulsory payments on the nominal amount of the shares shall be taken into consideration. In the event of a tied vote on a proposal to distribute or reserve profits, the profits to which the proposal relates shall be reserved'.

Hybrid securities are deeply subordinated securities and are, with the exception of common equity, the most junior instruments in the capital structure of the Company. The hybrid securities are undated and do not default on non-payment of coupons (unless such payment was mandatory following a resolution or payment of a dividend to common shareholders, i.e. as so called 'dividend pusher').

The holders of the hybrid securities have limited ability to influence the outcome of a bankruptcy proceeding or a restructuring outside bankruptcy. Consequently, the hybrid security holders cannot oblige TenneT to pay distributions or redeem the securities in part or in full. Payment of distributions on and redemption of the securities is at our sole discretion. As a result, the hybrid securities are classified as part of the equity attributable to the company's owners.

Independent auditor's report

To: the Shareholder and Supervisory Board of TenneT Holding B.V. ("**TenneT**" or the "**Company**")

Report on the audit of the financial statements 2023 included in the Integrated Annual Report 2023

Our opinion

We have audited the financial statements 2023 of TenneT, based in Arnhem, the Netherlands (the "**Financial Statements**"). The Financial Statements comprise the consolidated financial statements and the company financial statements.

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of TenneT as at 31 December 2023, and of its result and its cash flows for 2023 in accordance with International Financial Reporting Standards as adopted by the European Union ("**IFRS**") and with Part 9 of Book 2 of the Dutch Civil Code; and
- the accompanying company financial statements give a true and fair view of the financial position of TenneT as at 31 December 2023, and of its result for 2023 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

1. the consolidated statement of financial position as at 31 December 2023;
2. the following statements for 2023: the consolidated statement of income, the consolidated statements of comprehensive income, changes in equity and cash flows; and
3. the notes comprising a summary of the accounting policies and other explanatory information.

The company financial statements comprise:

1. the company statement of financial position as at 31 December 2023;
2. the company statement of income for 2023; and
3. the notes comprising a summary of the accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the Financial Statements' section of our report.

We are independent of TenneT in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the 'Wet toezicht accountantsorganisaties' (Audit firms supervision act), the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information in support of our opinion

We designed our audit procedures in the context of our audit of the Financial Statements as a whole and in forming our opinion thereon. The following information in support of our opinion was addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

Materiality

Based on our professional judgement we determined the materiality for the Financial Statements as a whole at EUR 75 million (2022: EUR 60 million). The materiality is based on 7% of the average of underlying operating profits for the years 2023, 2022 and 2021. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the Financial Statements for qualitative reasons.

Component audits are performed using the materiality levels determined by the judgement of the group engagement team, considering materiality for the consolidated financial statements as a whole and the reporting structure of the group. For the largest reporting entities, the audits are performed using the following component materiality levels:

- TenneT GmbH & Co. KG (“**TSO DE**”): EUR 51 million (2022: EUR 40.8 million); and
- TenneT TSO B.V. (“**TSO NL**”): EUR 33 million (2022: EUR 26.4 million).

For the other reporting entities, the component materiality levels did not exceed EUR 15 million (2022: EUR 12 million).

We agreed with the Supervisory Board that misstatements in excess of EUR 3.75 million (2022: EUR 3 million), which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the group audit

TenneT is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of TenneT.

Because we are ultimately responsible for the opinion, we are responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for reporting entities. Decisive were the size and/or the risk profile of the reporting entities or operations. On this basis, we selected reporting entities for which an audit had to be carried out on the complete set of financial information or specific items.

In establishing the overall group audit strategy and plan, we determined the type of work that needed to be performed at the components by the group engagement team and the component auditors.

Where the work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those components to be able to conclude whether sufficient appropriate audit evidence was obtained as a basis for our opinion on the Financial Statements as a whole. For each component we determined whether we required an audit of their complete financial information or whether other procedures would be sufficient.

Our group audit mainly focused on the significant group entities TenneT Holding B.V., TSO DE and TSO NL, because combined they make up more than 95% of the group’s revenue, underlying operating profit and assets. We included additional reporting entities in the scope of our group audit to have additional audit coverage on the group’s consolidated financial statements, and performed other procedures with respect to residual risk in components and account balances that have not been included in audit scope.

The group consolidation, Financial Statements disclosures and certain centrally coordinated accounting topics were audited by the group engagement team. These topics included among others treasury and corporate income tax. Team members with specialized knowledge were involved in the areas of forensic, tax, accounting, valuation, pension and information technology.

We have obtained the following audit coverage of the group with our audit procedures:

Audit coverage	
Revenue	99%
IFRS	98%
Assets	99%

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group’s financial information to provide an opinion on the consolidated financial statements.

Audit approach fraud risks

Description

An auditor conducting an audit in accordance with Dutch Standards on Auditing is responsible for obtaining reasonable assurance that the Financial Statements taken as a whole are free from material misstatement, whether caused by fraud or error. Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements of the Financial Statements may not be detected. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

We have exercised professional judgement and have maintained professional scepticism throughout our audit in identifying and assessing the risks of material misstatement of the Financial Statements due to fraud, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.

Our response

We performed the following procedures:

- In identifying potential risks of material misstatement due to fraud, we obtained an understanding of TenneT and its environment, including its internal controls. We evaluated TenneT's fraud risk assessment and made inquiries with management, those charged with governance and others within TenneT, including but not limited to the units/ departments (i) Internal Audit, (ii) Compliance & Integrity and (iii) Financial Governance Services. We reviewed their process for identifying and responding to the risk of fraud, the internal communication regarding their views on business practices and ethical behaviour and whether they have knowledge of any actual, suspected or alleged fraud affecting the Company. We considered whether identified fraud risks factors indicated a risk of material misstatement due to fraud.
- Following these procedures, and the presumed risks under the prevailing auditing standards, we identified significant risks due to fraud related to (i) management override of controls, amongst others in classification of operational expenditure as capitalised expenditure given the differences in related regulatory accounting and thus future revenues, and (ii) (procurement on) large Target Grid 2045 projects given their size and strategic importance.
- We held discussions amongst team members and component auditors to identify fraud risk factors and considered whether other information obtained from our risk assessment procedures indicated risks of material misstatement due to fraud. Fraud risk factors identified include among others:
 - fraud, bribery and corruption;
 - compliance with respect to trade regulations/sanctions;
 - compliance with respect to environmental requirements; and
 - compliance with procurement policies.
- We evaluated whether unusual or unexpected relationships have been identified in performing analytical procedures, that may indicate risks of material misstatement due to fraud.
- We involved forensic specialists, focused on our fraud and non-compliance risk assessment, inquiries with management, the evaluation of the internal control environment and in determining the audit response.
- We determined overall responses to address the assessed risks of material misstatement due to fraud at the financial statement level or at the assertion level which included:
 - assigning and supervising personnel with the adequate knowledge, skills and ability;
 - evaluating whether the selection and application of accounting policies by the group, particularly those related to subjective measurements and complex transactions, may be indicative of fraudulent financial reporting;
 - we tested the operating effectiveness of the relevant controls in the business processes surrounding project procurement and project cost accounting;
 - incorporating elements of unpredictability in the selection of the nature, timing and extent of our audit procedures, e.g. related to (i) our selections for further testing of tangible fixed asset projects, including Target Grid 2045 projects and (capital) expenses and (ii) our approach to (physical) asset inspections;
 - testing the appropriateness of journal entries recorded in the general ledger and adjustments made in the preparation of the Financial Statements;
 - evaluating whether the judgments and decisions made by management in making the accounting estimates included in the Financial Statements indicate a possible bias that may represent a risk of material misstatement due to fraud.

Significant accounting judgements, estimates and assumptions that might have a major impact on the Financial Statements are disclosed in note 1 of the consolidated Financial Statements. Useful life of assets, grid expense payables and the provision for decommissioning were focus areas in our audit as the related account balances are subject to significant management judgment. Reference is made to the section “Our key audit matters”; and

- performing a retrospective review of management judgments and assumptions related to significant accounting estimates such as cost assumptions on the decommissioning provisions and in-feed management accruals reflected in prior year Financial Statements. We considered available information and made enquiries of relevant executives and the Supervisory Board.

Based on our procedures performed, we have no matters to report.

Audit approach compliance with laws and regulations

Description

We are responsible for obtaining reasonable assurance that the Financial Statements, taken as a whole, are free from material misstatement, whether due to fraud or error taking into account the applicable legal and regulatory framework. However, we are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements in the Financial Statements may not be detected, even though the audit is properly planned and performed in accordance with the auditing standards. In the context of laws and regulations, the potential effects of inherent limitations on the auditor’s ability to detect material misstatements are greater for such reasons as the following:

- There are many laws and regulations, relating principally to the operating aspects of an entity, that typically do not affect the financial statements and are not captured by the entity’s information systems relevant to financial reporting.
- Non-compliance may involve conduct designed to conceal it, such as collusion, forgery, deliberate failure to record transactions, management override of controls or intentional misrepresentations being made to the auditor; and
- Whether an act constitutes non-compliance is ultimately a matter to be determined by a court or other appropriate adjudicative body.

Ordinarily, the less directly non-compliance is linked to the events and transactions reflected in the financial statements, the less likely the auditor is to become aware of it or to identify the non-compliance.

Our response

We performed the following procedures:

- As part of obtaining an understanding of TenneT and its environment we obtained a general understanding of the legal and regulatory framework applicable to TenneT and the industry in which it operates and how TenneT is complying with that framework.
- We assessed the laws and regulations relevant to the Company through discussion with management, those charged with governance and others within TenneT, including the units (i) Internal Audit, Risk & Internal Control and Compliance & Integrity, (ii) Legal Affairs, (iii) Regulatory Affairs, (iv) Business Guidance and (v) Financial Governance Services. We have read related minutes and reports. We involved our forensic specialists in our evaluation.
- We obtained sufficient appropriate audit evidence regarding provisions of those laws and regulations generally recognised to have a direct effect on the determination of material amounts and disclosures in the Financial Statements such as (corporate) tax and pension laws and financial reporting regulations, the requirements under IFRS and Part 9 of Book 2 of the Dutch Civil Code.
- Apart from these, TenneT is subject to other laws and regulations where the consequences of non-compliance could have a material effect on amounts and/or disclosures in the Financial Statements, for instance, through imposing fines or litigation. Given the nature of TenneT’s business and the complexity of European public procurement regulations, the *Energiewet* (Dutch Electricity Act), the *Energiewirtschaftsgesetz* (German Energy Industry Act), and other relevant Dutch and German energy laws and regulations, as well as environmental laws, there is a risk of non-compliance with the requirements of such laws and regulations. In addition, we considered relevant laws and regulations applicable to listed companies.

- Our procedures are more limited with respect to other laws and regulations that do not have a direct effect on the determination of the amounts and disclosures in the Financial Statements. These laws and regulations compliance may be fundamental to the operating aspects of the business, to TenneT's ability to continue its business, or to avoid material penalties (e.g., compliance with the energy laws in the Netherlands and Germany or compliance with environmental regulations) and therefore non-compliance with such laws and regulations may have a material effect on the Financial Statements. Our responsibility is limited to undertaking specified audit procedures to help identify non-compliance with those laws and regulations that may have a material effect on the Financial Statements.
- Our procedures are limited to (i) inquiry of the Executive Board, the Supervisory Board and others within TenneT as to whether the Company is in compliance with such laws and regulations and (ii) inspecting correspondence, if any, with the relevant licensing or regulatory authorities to help identify non-compliance with those laws and regulations that may have a material effect on the Financial Statements.
- We remained alert to indications of (suspected) non-compliance throughout the audit.
- We obtained written representations that all known instances of (suspected) fraud or non-compliance with laws and regulations have been disclosed to us.

Based on our procedures performed, we have no matters to report.

Audit approach going concern

Description

We are responsible for obtaining reasonable assurance that the Company is able to continue as a going concern. Management is responsible to assess the Company's ability to continue as a going concern and disclosing in the Financial Statements any events or circumstances that may cast significant doubt on the Company's ability to continue as a going concern.

As described in note 1, the Executive Board believes that no events or conditions give rise to doubt about the ability of the Company to continue in operation, for at least one year from the date of the end of the reporting period.

Our response

We performed the following procedures:

- We evaluated management's assessment of the going concern assumption and related disclosure note 1 of the Financial Statements;
- We challenged management's cash flow forecasts and primary assumptions, also in the light of our understanding obtained with regards to management's outlook as reported in the Board Report;
- We evaluated the Company's capital management objectives, including its long-term credit rating and liquidity on a rolling 12-month forward looking basis as disclosed in note 19; and
- We considered the Company's repayment obligations as disclosed in note 28.

Based on our procedures performed, we have no matters to report.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the Financial Statements. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the Financial Statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Project Ampere

Description

On 10 February 2023, TenneT announced that it intends to engage in discussion with the German government to investigate the potential full sale of TenneT's German activities. Since then, talks between the Dutch and German governments on the potential sale ("Project Ampere") have been ongoing. Based on the current state of the negotiation, TenneT has concluded that the IFRS 5 'Held for Sale' criteria have been met per 31 December 2023 and therefore have been applied to the Financial Statements.

We have included this as a key audit matter because of:

- the additional reporting risks such as incorrectly concluding that all IFRS 5 criteria have been met; and
- the one-off nature of this potential transaction could lead to incorrect accounting under the treatment of IFRS 5 and incomplete disclosures on the matter.

Our response

We performed the following procedures:

- We obtained a detailed understanding of the (internal) process that TenneT management uses to keep track of all developments in Project Ampere.
- We have reviewed all relevant minutes and reports, made regular inquiries with TenneT's Executive Board, Supervisory Board, and other key officers involved.
- We performed an analysis on the media coverage surrounding this topic, including potential developments in the process.
- We evaluated the affected accounting positions, including the judgment if all IFRS 5 'Held for Sale' criteria have been met as per 31 December 2023, and the related disclosures in the Financial Statements around the potential transaction.

Our observations

Our procedures did not identify material observations and we considered management's judgment and the disclosure thereon to be adequate.

Tangible fixed assets

Description

Securing supply and facilitating the energy transition by expanding and enhancing the high-voltage grid through integration of sustainable energy sources require substantial investments and flexible access to (equity) funding. TenneT expects to increase its annual investment volume to at least EUR 10 billion in 2024 for on- and offshore grid connections.

We have included this as a key audit matter because of:

- the financial significance of the tangible fixed assets and related capital expenditures;
- the risks associated with large investment projects, complexity in procurement, construction and timely completion;
- the professional judgment required in determining the impact of the energy transition on (i) (funding) the capital investment planning, and (ii) the existing asset portfolio, including the assessment of remaining useful lives of assets; and
- the professional judgement required in (i) assessing whether there is any indication that an asset may be impaired and (ii) if there is any such indication, estimating the recoverable amount of that asset (i.e., measuring any impairment).

Our response

We performed the following procedures:

- We tested the internal control environment related to tangible fixed assets through testing of operating effectiveness of relevant controls, including controls related to (i) investment approval, (ii) the financial closing of assets under construction, and (iii) the periodic determination of the useful lives of tangible fixed assets.
- We tested the design and implementation of relevant controls related to TenneT's liquidity forecast underpinning its ability to finance investments.
- We obtained and discussed internal management reports about progress of the key assets under construction and performed tests of details on the additions to and other movements in tangible fixed assets.
- We evaluated management's estimation of the useful lives of tangible fixed assets based on economic, regulatory and technical data.
- We evaluated management's assessment that no indications were identified that any assets may be impaired as at 31 December 2023.

Our observations

Our procedures did not identify material observations and we considered management's key assumptions, to be within the reasonable range of our own expectations.

Provision for decommissioning of (offshore) assets

Description

Moving towards a renewable future involves significant investments in (offshore) assets that are to be decommissioned over the next 20 to 40 years, thus requiring recognition of decommission provisions. The corresponding provisions are based on estimates of costs, timing of decommissioning, discount rates and inflation.

We have included this as a key audit matter because of:

- the significance of the provision and additions for the year triggered by the start of construction of new (offshore) assets; and
- the uncertainty involved in measuring the provision and sensitivity to changes in key assumptions, including the cost base, the inflation rate and the discount rate.

Our response

We have obtained management's position papers on the cost assumptions and alignment of the methodology across the Netherlands and Germany. Our audit procedures included testing of design and implementation of relevant controls around the periodical assessment of these assumptions and the evaluation of the financial model used to calculate the provision.

Our substantive audit procedures further included an assessment of the reasonability of the key assumptions through comparison with observable market data and procedures to address the completeness of the provision.

Furthermore, we evaluated the appropriateness of the disclosure of the accounting policy and estimation uncertainty of these provisions.

Our observations

Our procedures did not identify material observations and we considered management's key assumptions, to be within the reasonable range of our own expectations.

Report on the other information included in the Integrated Annual Report 2023

The Integrated Annual Report 2023 contains other information, in addition to the Financial Statements and our auditor's report thereon. The other information consists of:

1. Director's Report, consisting of:
 - a. About TenneT;
 - b. Our performance in 2023;
 - c. Corporate Governance; and
 - d. EU Taxonomy disclosures.
2. Supervisory Board Report.
3. Other Information as required by Part 9 of Book 2 of the Dutch Civil Code.
4. Other information included in the integrated annual report.

Based on the following procedures performed, we conclude that the other information:

- is consistent with the Financial Statements and does not contain material misstatements; and
- contains all the information regarding the director's report and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the Financial Statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard on Auditing 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the Financial Statements.

Management is responsible for the preparation of the other information, including the Director's Report in accordance with Part 9 of Book 2 of the Dutch Civil Code, and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements and ESEF

Engagement

We were engaged by the annual meeting of shareholders as auditor of TenneT on 18 December 2019, as of the audit for the year 2020 and have operated as statutory auditor ever since that financial year.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

European Single Electronic Format (ESEF)

TenneT has prepared its annual report in ESEF. The requirements for this are set out in the Commission Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (the “RTS on ESEF”).

In our opinion, the annual report, prepared in XHTML format, including the (partly) marked-up consolidated financial statements, as included in the reporting package by TenneT complies in all material respects with the RTS on ESEF.

Management is responsible for preparing the annual report including the Financial Statements in accordance with the RTS on ESEF, whereby management combines the various components into a single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the annual report in this reporting package complies with the RTS on ESEF.

We performed our examination in accordance with Dutch law, including Dutch Standard 3950N ‘Assurance-opdrachten inzake het voldoen aan de criteria voor het opstellen van een digitaal verantwoordingsdocument’ (assurance engagements relating to compliance with criteria for digital reporting).

Our examination included amongst others:

- Obtaining an understanding of the Company's financial reporting process, including the preparation of the reporting package.
- Identifying and assessing the risks that the annual report does not comply in all material respects with the RTS on ESEF and designing and performing further assurance procedures responsive to those risks to provide a basis for our opinion, including:
 - obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance and the XBRL extension taxonomy files has been prepared in accordance with the technical specifications as included in the RTS on ESEF; and
 - examining the information related to the consolidated financial statements in the reporting package to determine whether all required mark-ups have been applied and whether these are in accordance with the RTS on ESEF.

Description of responsibilities regarding the Financial Statements

Responsibilities of management and the Supervisory Board for the Financial Statements

Management is responsible for the preparation and fair presentation of the Financial Statements in accordance with IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the Financial Statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the Financial Statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the Company's ability to continue as a going concern in the Financial Statements.

The Supervisory Board is responsible for overseeing the Company's financial reporting process.

Our responsibilities for the audit of the Financial Statements

Our objective is to plan and perform the audit assignment in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Financial Statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included among others:

- Identifying and assessing the risks of material misstatement of the Financial Statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the Financial Statements, including the disclosures.
- Evaluating whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicated with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identified during our audit. In this respect we also submitted an additional report to the Audit, Risk and Compliance Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provided the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the Financial Statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Rotterdam, 4 March 2024

Deloitte Accountants B.V.

Signed on the original J.A. de Bruin

Limited assurance report of the independent auditor with respect to the 2023 Sustainability Information of TenneT Holding B.V.

To: the Shareholder and Supervisory Board of TenneT Holding B.V. (“TenneT” or the “Company”)

Our conclusion

We have performed a limited assurance engagement on the sustainability information included in the Integrated Annual Report for the year 2023 (“IAR”), of TenneT based in Arnhem (the “Sustainability Information”). Our procedures did not cover the information set out in the section ‘EU Taxonomy disclosures’ on page 213.

Based on our procedures performed and the assurance information obtained, nothing has come to our attention that causes us to believe that the Sustainability Information in the accompanying IAR does not present fairly, in all material respects:

- the policy and business operations with regard to sustainability; and
- the business operations, events and achievements in 2023

in accordance with the applicable criteria as included in the ‘Reporting criteria’ section of our report.

The Sustainability Information consists of the performance information in the chapters ‘At a glance 2023’, ‘Letter from the Board’, ‘About TenneT’, ‘Our Performance in 2023’ (excluding the sections ‘Safeguard sustainable financial performance’ and ‘Statements of the Executive Board’) and the section ‘About this report’ in the IAR.

Basis for our conclusion

We have performed our limited assurance engagement on the Sustainability Information in accordance with Dutch law, including Dutch Standard 3810N ‘Assurance-opdrachten inzake duurzaamheidsverslaglegging’ (Assurance engagements relating to sustainability reports) which is a specified Dutch Standard that is based on the International Standard on Assurance Engagements (ISAE) 3000 ‘Assurance engagements other than audits or reviews of historical financial information’. This assurance engagement is aimed at obtaining limited assurance. Our responsibilities under this standard are further described in the ‘Our responsibilities for the review of the Sustainability Information’ section of our report.

We are independent of TenneT in accordance with the ‘Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten’ (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagement. Furthermore, we have complied with the ‘Verordening gedrags- en beroepsregels accountants’ (VGBA, Dutch Code of Ethics for Professional Accountants).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Reporting criteria

The reporting criteria applied for the preparation of the Sustainability Information are the Sustainability Reporting Standards of the Global Reporting Initiative (“GRI Standards”) and the criteria supplementally applied as disclosed in the chapter ‘About the report’ of the IAR.

The Sustainability Information is prepared with reference to the GRI Standards. The GRI Standards used are listed in the GRI Content Index as disclosed on page 205 of the IAR.

The comparability of Sustainability Information between entities and over time may be affected by the absence of a uniform practice on which to draw, to evaluate and measure this information. This allows for the application of different, but acceptable, measurement techniques.

Consequently, the Sustainability Information needs to be read and understood together with the criteria applied.

Materiality

Based on our professional judgement we determined materiality levels for each relevant part of the sustainability information. When evaluating our materiality levels, we considered quantitative and qualitative aspects as well as the relevance of information for both stakeholders and the company.

Limitations to the scope of our review

The Sustainability Information includes prospective information such as ambitions, strategy, plans, expectations, estimates and risk assessments. As discussed in the section 'Climate related risks and opportunities' on page 109 of the IAR, the Sustainability Information includes information based on climate-related scenarios that is subject to inherent uncertainty because of incomplete scientific and economic knowledge about the likelihood, timing or effect of possible future climate-related impacts. Prospective information relates to events and actions that have not yet occurred and may never occur. We do not provide any assurance on the assumptions and achievability of this prospective information.

In the Sustainability Information, the calculations to determine the Impact Indicators are mostly based on assumptions and sources from third parties. The assumptions and sources used are disclosed in the chapter The Sustainable Development Goals of the IAR and further elaborated in the Additional CSR data document as available on the website of TenneT. We have reviewed that these assumptions and external sources are appropriate, but we have not performed procedures on the content of these assumptions and external sources

The references to external sources or websites in the Sustainability Information are not part of the Sustainability Information as included in the scope of our assurance engagement. We therefore do not provide assurance on this information. Our conclusion is not modified in respect to these matters.

Responsibilities of management and the Supervisory Board for the Sustainability Information

Management is responsible for the preparation and fair representation of the Sustainability Information in accordance with the criteria as included in the 'Reporting criteria' section, including the identification of stakeholders and the definition of material matters. Management is also responsible for selecting and applying the criteria and for determining that these criteria are suitable for the legitimate information needs of stakeholders, considering applicable law and regulations related to reporting. The choices made by management regarding the scope of the Sustainability Information and the reporting policy are summarised in the chapter 'Our strategy and value creation' of the IAR.

Furthermore, management is responsible for such internal control as it determines is necessary to enable the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error.

The Supervisory Board is responsible for overseeing the sustainability reporting process of TenneT.

Our responsibilities for the assurance engagement on the Sustainability Information

Our responsibility is to plan and perform the review in a manner that allows us to obtain sufficient and appropriate assurance evidence to provide a basis for our conclusion.

Our assurance engagement is aimed to obtain a limited level of assurance to determine the plausibility of information. The procedures vary in nature and timing from, and are less in extent, than for a reasonable assurance engagement. The level of assurance obtained in a limited assurance engagement is therefore substantially less than the assurance that is obtained when a reasonable assurance engagement is performed.

We apply the 'Nadere voorschriften kwaliteitssystemen' (NVKS, regulations for Quality management systems) and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and other relevant legal and regulatory requirements.

Our limited assurance engagement included among others:

- Performing an analysis of the external environment and obtaining an understanding of relevant social themes and issues, and the characteristics of TenneT.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the Sustainability Information. This includes the evaluation of TenneT's materiality assessment and the reasonableness of estimates made by management.
- Obtaining through inquiries a general understanding of the internal control environment, the reporting processes and information systems and the entity's risk assessment process relevant to the preparation of the Sustainability Information, without obtaining assurance information about the implementation or testing the operating effectiveness of controls.
- Identifying areas of the Sustainability Information where misleading or unbalanced information or material misstatements, whether due to fraud or error, is likely to arise. Designing and performing further assurance procedures aimed at determining the plausibility of the Sustainability Information responsive to this risk analysis. These procedures consisted amongst others of:
 - obtaining inquiries from management, KPI owners and/or other relevant staff at corporate and business level responsible for the sustainability strategy, policy and results;
 - obtaining inquiries from relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the Sustainability Information;
 - determining the nature and extent of the procedures for KPI's. For this, the nature, extent and/or risk profile of the KPI's are decisive. Based thereon we selected the KPI owners or other relevant staff whom we have interviewed.
 - obtaining assurance evidence that the Sustainability Information reconciles with underlying records of TenneT;
 - reviewing, on a limited test basis, relevant internal and external documentation; and
 - performing an analytical review of the data and trends.
- Reading the information in the IAR which is not included in the scope of our assurance engagement to identify material inconsistencies, if any, with the Sustainability Information.
- Considering the overall presentation and balanced content of the sustainability information.
- Considering whether the Sustainability Information as a whole, including the sustainability matters and disclosures, is clearly and adequately disclosed in accordance with the applicable criteria.

We communicated with the Executive Board and Supervisory Board regarding, among other matters, the planned scope, timing and outcome of the review and significant findings that we identified during our review.

Rotterdam, 4 March 2024

Deloitte Accountants B.V.

Signed on the original J.A. de Bruin

About this report

Scope of this report

The scope of this report is TenneT Holding B.V. and the subsidiaries in which it has a controlling interest (generally speaking a voting interest of over 50%). For example, our 50% stake in BritNed and BritNed's activities are not included in our results. This integrated report covers the full year 2023, i.e. 1 January 2023 to 31 December 2023. TenneT's Integrated Annual Report 2023 was published on 11 March 2024 and is available [online](#).

In 2023, there were no significant acquisitions or divestments impacting our non-financial reporting. A complete overview of all the consolidated entities in this Integrated Annual Report is disclosed in [note 31 of the consolidated financial statements](#). Our reporting policy in the event of acquisitions or divestments is disclosed in notes 1, 2, 12 and 13 of the consolidated financial statements. For non-financial performance we report acquisitions and divestments from the day of purchase or when an entity is sold respectively. We recognise that in the event of acquisitions, reporting improvements may be required which may result in data being estimated.

Reporting principles

Our non-financial qualitative and quantitative information is prepared with reference to the Global Reporting Initiative (GRI) Universal Standards. In absence of sector guidance, we also adhere to the sector guidelines for our industry (G4 sector disclosures - electric utilities). For more information, please refer to the reporting guidance document on our [corporate website](#).

The GRI context index, as included on our corporate website, shows which GRI aspects are material to TenneT and refers to those sections in the report describing this aspect. In addition, and in accordance with the policy on state-owned companies (*Nota Deelnemingenbeleid Rijksoverheid 2022*), TenneT complies with the Dutch Corporate Governance Code, as laid down in the Corporate Governance section of this report. As required per this policy, TenneT also signed the Diversity Charter in 2021 and embraces the principles of the Tax Governance Code.

We have used the Integrated Reporting (IR) framework, as defined by the International Integrating Reporting Council (IIRC, which together with SASB formed the Value Reporting Foundation in 2021) as a basis for this integrated report. This allows us to be transparent about our impact as an organisation. The financial information in this report was prepared in accordance with IFRS, as adopted by the EU, and complies with Part 9 of Book 2 of the Dutch Civil Code.

Furthermore, our Integrated Annual Report complies with the EU Non-Financial Reporting Directive (NFRD), which was translated to Dutch legislation and has been mandatory for annual reports since 2017. In 2022, the successor of this legislation was published: the Corporate Sustainability Reporting Directive (CSRD). This directive sets out the legal basis to which companies, that fulfil the requirements set out in this legislation, need to comply to and as of which date to be more transparent on how companies manage and perform with respect to the organisation's environmental, social and governance related impacts, risks and opportunities. As a company already needing to comply to the NFRD, TenneT needs to report in accordance with the CSRD as of reporting year 2024. TenneT has started its preparations to comply to this new EU legislation, ahead of the finalisation of the legislation and delivery of the reporting standards connected to them, the European Sustainability Reporting Standards (ESRS).

The CSRD legislation was finalised in November 2022 and the final wording of the ESRS was agreed upon and adopted by the European Commission in July 2023. TenneT has started preparing to become CSRD ready and to be able to report on the requirements set by the ESRS. Therefore, TenneT has performed a double materiality analysis (refer to the 'Stakeholders and materiality' section) and been performing gap analyses to determine potential gaps between what the ESRS requires and how impacts, risks and opportunities for a certain topic are currently managed.

Examples of this relate to where we can better explain the connection between TenneT’s strategy, the policies, actions, targets and metrics defined for instance. With a relatively new topic for TenneT such as circularity, we are aware that managing this impact in the context of ESRS, is a journey and there is still ground to cover. That is why we have been working step by step on this and closing gaps one step at a time. In 2024, TenneT will continue to work on gaps identified.

Furthermore, this report is also part of our progress and how we implement the 10 principles of the United Nations Global Compact (UNGC). We have endorsed these principles since 2015, not just to underline our own commitment, but also to drive CSR performance in the value chain. The UNGC principles are the basis of our TenneT Supplier Code of Conduct and mandatory for all suppliers. New suppliers who do not meet our standards during supplier visits, are disqualified from our tender procedures. The way communication on the progress related to the UNGC has changed in 2022 and as of 2023 this will be shared via the [UNGC website](#).

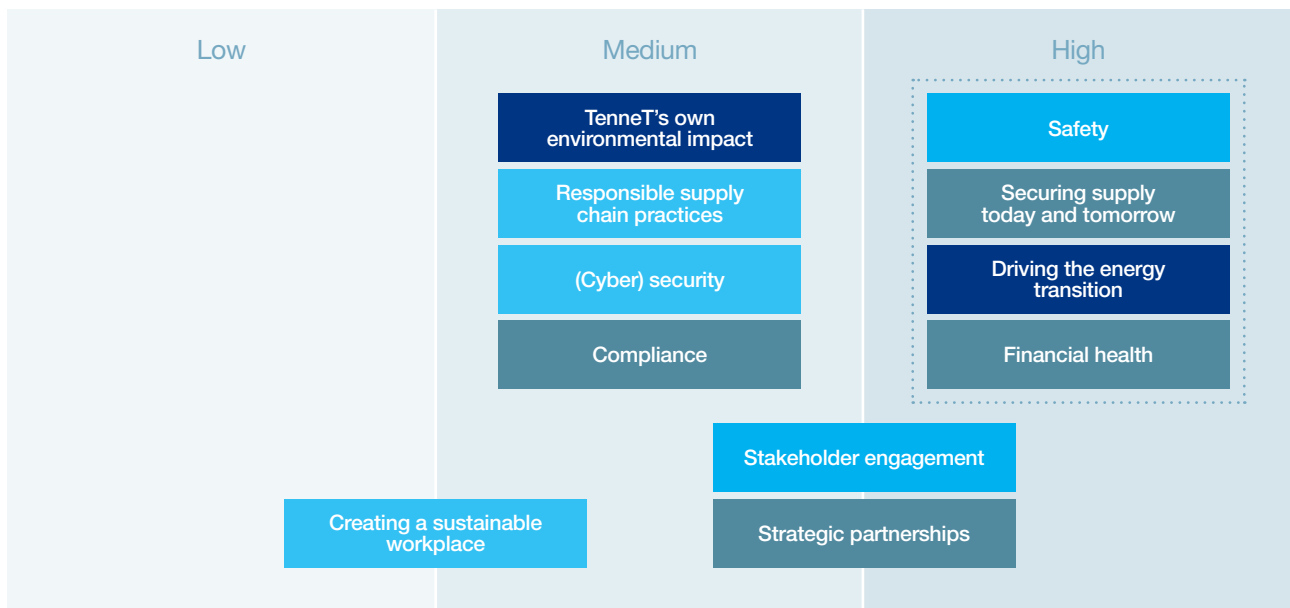
In 2015, the United Nations launched the Sustainable Development Goals (SDGs). These goals are accepted worldwide as driving sustainability. The section in our Integrated Annual Report ‘[The Sustainable Development Goals](#)’ describes our impact and the contribution we make to the SDGs that are most relevant to our business.

Stakeholders and materiality

In accordance with the applied reporting principles, this integrated report covers topics considered material to our organisation. TenneT uses the materiality principle to determine which subjects/impacts to include in the report related to which activities (also with respect to our supply chain) to take into account. Our corporate website (www.tennet.eu) includes additional information which was not considered material for integrated reporting purposes. How we defined the material topics and the results of this assessment can be found in the materiality section below. The fact that we report on selected topics does not mean we do not manage aspects that are not considered material to our business. Our activities and CSR policy are broader and are not limited to the outcome of the materiality analysis. For more detailed information, go to the CSR section of our [website](#).

Materiality

Significance of TenneT’s Economic, Environmental and Social impact



■ Economic ■ Environmental ■ Social ■ Most significant impacts

Our policy is to perform a materiality analysis every two to three years and review the analysis every year to identify gaps in intermediate years. As 2023 is the final year we will be reporting based on GRI, due to the reporting requirements related to the CSRD as of reporting year 2024, we made use of the materiality analysis performed in 2022 and reconfirmed its appropriateness for our 2023 annual reporting. This is based on the guidance provided by GRI in their Universal Standards (2021), described in GRI 3. Here, the analysis of the significance of TenneT's economic, social and environmental impact was performed and determined through an internal analysis. We included the views of our (external) stakeholders from earlier surveys and interactions in this analysis. This determined whether our impact per topic is either high, medium or low. The outcome of this analysis was reviewed and validated by our highest governance body, being both the Executive Board and the Supervisory Board. The outcome of this was that the following four impacts are considered to be our key material topics: safety, securing supply today and tomorrow, driving the energy transition and financial health. The materiality process is thoroughly embedded in the TenneT organisation. After validation, the materiality analysis was completed and resulted in the overview, depicted on the previous page.

As aforementioned, the European Commission adopted the CSRD legislation in 2022, and will replace the NFRD requirement when the first organisations need to report based on the ESRS in regarding fiscal year 2024, such as TenneT. With respect to materiality, the concept of double materiality is mentioned in both the NFRD as well as the CSRD. This means that on the one hand, companies need to assess the degree of the impact the organisation's material environmental, social and governance (ESG) impacts, risks and opportunities on people and planet and also on the other hand how these impacts, risks and opportunities financially impact the organisation.

As TenneT, our impact on both dimensions is disclosed in our annual reporting already in several ways. This is on the one hand a part of the materiality analysis where the significance of TenneT's impact is assessed per relevant topic. Key impacts are also disclosed quantitatively and qualitatively in the relevant chapters. With regards to our impact on people, this is disclosed in 'Our stakeholders' and the chapter 'Safe and inspiring workplace'. Our impact on the environment is disclosed in the chapter 'Create value to transition to a climate-neutral economy'.

On the other hand, the impact of ESG impacts, risks and opportunities on TenneT is currently described in the way we incorporate the Taskforce for Climate related Financial Disclosures (TCFD) recommendations in Integrated Annual Report 2023. The impact of climate change on our activities and the associated risks and opportunities are disclosed [here](#). We also disclose how developments related to people and the environment could impact us as a company, for example in 'Key Developments' and the 'What could prevent us from reaching our goals?' in each chapter of 'Our performance'. This relates to the effects of climate change, scarcity of goods and services, changing demographics, also related to our people and future employees, might impact us, as for instance changing demographics and scarcity of (technical) talent provides challenges.

However, this is just covering a part of the ESRS requirements. That is why we have finalised our double materiality analysis in the second half of 2023 to prepare ourselves for the reporting year 2024 and reporting based on ESRS. As there are differences between how GRI and ESRS approach the concept of materiality, we have used the outcomes of this assessment purely for the preparation of the 2024 reporting and not to base our Integrated Annual Report 2023 on.

The double materiality analysis performed has been executed in accordance with ESRS 2 and has made use of obtaining the views of stakeholders via surveys, internal desktop research and expert sessions with internal stakeholders from multiple departments such as CSR experts, risk specialists and colleagues with a broad financial background. This analysis has been reviewed and validated by both our Executive Board and Supervisory Board in 2023. As a result, the following impacts, risks and opportunities have been identified as material:

- Safe working environment
- Security of supply
- Financial health
- Climate change
- Resource use and circularity
- Responsible Supply Chain Practices
- Delivering the energy transition

These outcomes are used to prepare ourselves for the 2024 annual reporting based on ESRS. In this year's annual report, we already disclose information on all of the topics that are deemed material based on this double materiality assessment, where for certain topics to a greater extent than for others. In Integrated Annual Report 2024, we will ensure that our disclosures on how we manage these topics are prepared in accordance with ESRS.

Scope and boundaries

The table on the next pages provides a clear overview of the material topics, their impact, our contribution and the boundaries. A detailed disclosure of our management approach on each material topic can be found in the CSR section of our website.

Material topic	Safety	Security of supply	Drive the energy transition	Financial health
Reference				
• Chapter	• Create a safe and inspiring workplace	• Deliver a high security of supply	• Deliver a high security of supply, Ensure critical infrastructure for society, • Create value to transition to a climate neutral economy, • Solve societal challenges with stakeholders and through partnerships	• Safeguard sustainable financial performance
• Why material?	• Our employees are our most important and valuable asset, which is why the safety of everyone involved in our activities (employees and contractors) is a top priority.	• Our main task is to ensure security of electricity supply to more than 43 million people across the Netherlands and Germany.	• With our knowledge, experience and vision with respect to the future energy landscape, we believe that we can serve society by helping to drive the energy transition in an effective and efficient manner.	• Safeguarding sustainable financial performance will enable us to drive the energy transition against lower societal costs. We need to invest in onshore and offshore grid infrastructure to realise the energy transition over the next ten years and achieve the energy goals set by the Dutch and German government.
• What is the impact?	• We need to make sure our employees can perform their work safely, as every safety incident is one too many.	• Electricity is the backbone of the economy of the countries we operate in.	• National governments in the area we serve have committed themselves to national and international climate agreements. We are an important stakeholder to help realise this.	• It is important to carefully make the right investment decisions and to manage them properly to be sure we are doing the right things at acceptable costs.
• What is our role?	• We are responsible for integrating safety into our daily practices as a TSO.	• We are responsible for maintaining a balance between supply and demand; we operate and manage the high-voltage grid.	• To connect everyone with a brighter energy future, we need to lead as a green grid operator, be a thought leader in the energy transition, develop innovative instruments to unlock flexibility and establish a pivotal role in the energy data world to facilitate innovation.	• We are responsible for realising the investment programme and living up to our stakeholders' expectations.

Material topic	Safety	Security of supply	Drive the energy transition	Financial health
<ul style="list-style-type: none"> • What are the boundaries? 	<ul style="list-style-type: none"> • We are responsible for making sure everyone that works with and for us can return safely to their homes at the end of the day. The scope of our safety reporting relates to both our own employees as safety incidents from employees working for our contractors related to our projects. 	<ul style="list-style-type: none"> • We are responsible for transmission services. Production is the responsibility of producers, distribution lies with DSOs. 	<ul style="list-style-type: none"> • Our boundaries related to this topic align with the scope of this report. • For our carbon footprint reporting, we broadened the scope of our reporting this year as also the scope 3 emissions related to purchased and capital goods and services are included related to the realisation of our assets. 	<ul style="list-style-type: none"> • We are responsible for realising our investment portfolio. The investment programme is based on the task we are given by the Dutch and German governments.
<ul style="list-style-type: none"> • Key Performance Indicators (KPIs) 	<ul style="list-style-type: none"> • TRIR 	<ul style="list-style-type: none"> • Security of supply: uptime in % 	<ul style="list-style-type: none"> • Amount of GW of offshore capacity realised 	<ul style="list-style-type: none"> • Adjusted underlying EBIT group FFO/Net debt ROIC
<ul style="list-style-type: none"> • Targets/ambitions 	<ul style="list-style-type: none"> • 4.3 (in 2023) 	<ul style="list-style-type: none"> • 99.99962% grid availability onshore • 95.07% grid availability offshore 	<ul style="list-style-type: none"> • TenneT aims to connect over 43 GW of offshore wind energy by ~2030. 	<ul style="list-style-type: none"> • In 2023, our investment target was EUR 6.3 billion • To finance our investments, our target is to deliver at least EUR 10 billion per year in projects while securing our supply chain.
<ul style="list-style-type: none"> • Unit(s) responsible within organisation 	<ul style="list-style-type: none"> • Health, Safety & Environment (HSE) 	<ul style="list-style-type: none"> • Asset Management (AMT) Large Projects departments (LPG), (LPN), (LPD), (LPO) System Operations (SOP), Grid Field Operations, (GFO) 	<ul style="list-style-type: none"> • Large Projects departments (LPG), (LPN), (LPD), (LPO) Digital & Process Business Technology Organisation (BTO), Grid Field Operations (GFO) 	<ul style="list-style-type: none"> • Strategic Investment Committee, Supervisory Board, Business Guidance Corporate (BGD)

For most of our figures, our reporting focus is on our own operations, although we do take some aspects of the value chain into account in our carbon footprint and safety (TRIR). We recognise that reporting outside our gate (so-called 'value chain reporting') provides a better overview of our impact. We will strive to expand the boundaries of our reporting where possible in the next years.

EU Non-Financial Reporting Directive

Our Integrated Annual Report complies with the EU Non-Financial Reporting Directive with respect to non-financial and diversity information. The table below provides a clear overview of where the different aspects of this directive are reported.

	A description of the policies pursued, including due diligence.	The outcome of those policies.	Principle risks in own operations and within value chain.	How risks are managed.	Non-financial key performance indicators.
Topic					
<ul style="list-style-type: none"> Relevant social and personnel matters (e.g. HR, safety etc.) 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Create value to transition to a climate-neutral economy Solve societal challenges with stakeholders and through partnerships 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Create value to transition to a climate-neutral economy Solve societal challenges with stakeholders and through partnerships 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Create value to transition to a climate-neutral economy Solve societal challenges with stakeholders and through partnerships 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Create value to transition to a climate-neutral economy Solve societal challenges with stakeholders and through partnerships 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Create value to transition to a climate-neutral economy Solve societal challenges with stakeholders and through partnerships
<ul style="list-style-type: none"> Relevant Environmental matters (e.g. climate-related impacts) 	<ul style="list-style-type: none"> Create value to transition to a climate-neutral economy 	<ul style="list-style-type: none"> Create value to transition to a climate-neutral economy 	<ul style="list-style-type: none"> Create value to transition to a climate-neutral economy 	<ul style="list-style-type: none"> Create value to transition to a climate-neutral economy Climate related risks 	<ul style="list-style-type: none"> Create value to transition to a climate-neutral economy
<ul style="list-style-type: none"> Relevant matters with respect for human rights (e.g. labour protection) 	<ul style="list-style-type: none"> About TenneT - The supply chain of TenneT 	<ul style="list-style-type: none"> About TenneT - The supply chain of TenneT 	<ul style="list-style-type: none"> About TenneT - The supply chain of TenneT Create value to transition to a climate-neutral economy 	<ul style="list-style-type: none"> About TenneT - The supply chain of TenneT Create value to transition to a climate-neutral economy 	<ul style="list-style-type: none"> About TenneT - The supply chain of TenneT
<ul style="list-style-type: none"> Relevant matters with respect to anti-corruption and bribery 	<ul style="list-style-type: none"> Corporate Governance 	<ul style="list-style-type: none"> Corporate Governance 	<ul style="list-style-type: none"> Corporate Governance 	<ul style="list-style-type: none"> Corporate Governance 	<ul style="list-style-type: none"> Corporate Governance

	A description of the policies pursued.	Diversity targets	Description of how the policy is implemented	Results of the diversity policy
Topic				
<ul style="list-style-type: none"> Insight into the diversity (executive board and the supervisory board) 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Supervisory Board report, 8. Inclusion and Diversity 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Supervisory Board report, 8. Inclusion and Diversity 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Supervisory Board report, 8. Inclusion and Diversity 	<ul style="list-style-type: none"> Create a safe and inspiring workplace Supervisory Board report, 8. Inclusion and Diversity

Data collection process

The reported data is obtained from financial and non-financial data management systems in our own operations, such as IFS and SAP for financial and HR data, Mecoms for our electricity transport data, and Zenya for our incident reporting, i.e. safety data. The key non-financial qualitative and quantitative data is included in the regular planning and control cycles and reported internally at least once a quarter by the Business Guidance department which performs a check on the quality and reliability of the data. TenneT's Executive Board and senior management contribute to the context of the report and the quantitative data.

The definitions and calculations used are disclosed in the abbreviations and definitions section of this Integrated Annual Report and in the CSR section of our corporate website. The definitions and calculations used were re-assessed based on such things as process improvements, further alignment within the group and the materiality analysis. As a result, certain originally reported comparative figures were re-classified to conform to the current year's presentation.

The data for this report was measured, and where no data was available, it was estimated. An example of this is the energy use at some of our smaller offices. Due to the nature and maturity level of non-financial data, we acknowledge that it is a journey to fully align this with the level of financial systems and processes. Therefore, improvements can be made over time with the aim to provide our stakeholders better and more relevant information. That is why 100% completeness and accuracy of our data cannot be guaranteed as processes may be subject to a higher degree of manual data collection.

External assurance

The financial statements included in this report are subject to an independent external audit and TenneT's non-financial reporting is subject to a limited assurance review. These were both conducted by our external auditor, Deloitte Accountants B.V.. Reliable data is essential in our dialogue with stakeholders, so we decided to have our non-financial data reviewed by an external assurance provider. We have requested Deloitte to review the Integrated Annual Report sections 'At a Glance', 'Letter from the Board', 'About TenneT' and 'Our Performance in 2023' (excluding 'Safeguard sustainable financial performance' and 'Statements of the Executive Board') with reference to the GRI Standards and audit the financial statements in accordance with IFRS as adopted by the EU and Part 9 of Book 2 of the Dutch Civil Code.

Governance of CSR

For TenneT, CSR covers a broad range of subjects, all aimed at creating a sustainable future for our internal and external stakeholders. CSR is embedded in our current strategy. We have set clear priorities, targets and key performance indicators in this. For some areas we are currently developing new or updating key performance indicators. On an overall level, our Executive Board is responsible for our strategy and company target setting, which includes the areas with respect to CSR. Our Strategy and Partnerships department, is mandated by the Executive Board to make decisions based on the CSR areas in our overall strategy and to execute studies for future ambitions with respect to CSR. In case new decisions and directions, this will be approved by the relevant decision committee within our organisation depending on the topic (Future Design, Asset, Integrated Work Planning or Systems & Market committee). In addition, business units are responsible for the topics that relate to their unit and sustainable development. The senior leaders are requested to manage and steer on their respective responsibility areas.

These units report the progress with respect to our strategy, our financial and non-financial performance (including our CSR policy and actions) on a quarterly basis and this is reviewed by our Executive Board and Supervisory Board in that frequency to evaluate whether we are on track and or if actions are deemed necessary to improve. Our Supervisory Board consists of members all with knowledge of various elements of sustainable development. For more information, refer to page 90 of the Supervisory Board report where the capabilities matrix is included.

Other information

TenneT Holding B.V. and its subsidiaries are a leading electricity transmission system operator with activities in the Netherlands and a large part of Germany. In the Netherlands, our activities are conducted by TenneT TSO B.V. and its subsidiaries. In Germany, our activities are performed by TenneT GmbH & Co. KG and its subsidiaries.

The Dutch state owns the entire issued share capital of TenneT Holding B.V. Furthermore, TenneT Holding B.V. has issued hybrid securities which are deeply subordinated and are accounted for as part of equity attributable to equity holders of the Company. The registered office of TenneT Holding B.V. is located at Utrechtseweg 310, Arnhem, the Netherlands, with its statutory seat in Arnhem and a registration with the Dutch Commercial Register under number 09083317.

EU Taxonomy disclosures

Introduction

The EU Taxonomy constitutes one of the cornerstones for both the European Green Deal as well as the EU Action Plan on Sustainable Finance. It aims to facilitate the flow of capital towards more sustainable investments in the EU. However, to do so, a clear definition of what constitutes as “sustainable” is needed. And this is what the EU Taxonomy is aimed at – providing clear guidance on when an activity can be deemed sustainable. In 2023, additional guidance has been published with respect to the remaining four environmental goals:

- The sustainable use and protection of water and marine resources
- The transition to a circular economy
- Pollution prevention and control
- The protection and restoration of biodiversity and ecosystems

Considering that nearly all of our activities already relate to EU Taxonomy 4.9 ‘Transmission and distribution of electricity’ (NACE code D35.12), the published guidance on the remaining four environmental goals is not final yet and that the guidance in TenneT’s case relates to assessing the remaining approximately 1% of our Taxonomy metrics against this guidance, we concluded that we do not claim eligibility and alignment against one of the other environmental goals for the currently remaining ineligible part of our activities.

Reporting requirements

TenneT, subject to the Non-Financial Reporting Directive (NFRD) via Part 9 of Book 2 of the Dutch Civil Code, is required to apply the EU Taxonomy Regulation 2020/852 in its corporate reporting as of reporting year 2021. As of 2022, and in accordance with these requirements, TenneT reported on its eligible contribution to the European Union’s environmental objectives of climate change mitigation (CCM) according to the guidelines laid down in the EU Taxonomy. We reported the share of turnover, capital expenditure (CAPEX) and operating expenditure (OPEX) that we have deemed ‘Taxonomy-eligible’ - irrespective of whether these activities met any or all the technical screening criteria stated in the Taxonomy. As of 2022, and in accordance with these requirements, TenneT reported on its eligible contribution to the European Union’s environmental objectives of climate change mitigation (CCM) according to the guidelines laid down in the EU Taxonomy.

In reporting year 2023, TenneT determined whether its activities are taxonomy ‘eligible’ and ‘aligned’ for the environmental goal climate change mitigation. This builds on the 2021 ‘EU Taxonomy eligibility’ by requiring the activities to meet additional criteria for:

- Substantial contribution to climate change mitigation;
- Do no significant harm (DNSH) to any other environmental objectives for those activities; and
- Minimum safeguards at the organisational level.

To this end, we analysed whether we met the requirements for these elements, based on the assessment performed in 2022 and updated this on certain elements. This relates to reviewing and assessing the technical screening criteria related to this economic activity, next to the review of the respective DNSH as included in the respective annex as well as the minimum safeguards to which the European Commission provided additional guidance in their final report of October 2022. Furthermore, we comprehensively analysed and screened our eligible economic activities and the turnover they generate, as well as our CAPEX and OPEX, and determined the share that qualifies as Taxonomy-aligned.

For reporting year 2023, we leveraged on the 2022 assessments and updated them where required.

Basis for preparation

As indicated in Annex I to the Commission Delegated Regulation, article 1.2, the basis of how the KPIs are prepared, is included in our Integrated Annual Report 2023. This relates to the accounting policy (1.2.1), where is explained how these KPIs were determined and how the allocation has been performed. As nearly all of our activities are related to EU Taxonomy 4.9 ‘Transmission and distribution of electricity’, allocation to different economic activities is not applicable. This is because our primary tasks are to provide electricity transmission services and system services and to facilitate the energy

market. Those economic activities are linked to NACE code D35.12 and are concluded to substantially contribute to climate change mitigation, since TenneT is transmitting and distributing renewable energy in line with Directive (EU) 2018/2001, including necessary reinforcement or extension of the grid. In line with technical screening criterium 4.9 'Transmission and distribution of electricity' on climate mitigation, as per Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 Annex I. The regulated activities are as such EU Taxonomy eligible activities (in the table known as activity A) and the non-regulated activities are EU Taxonomy non-eligible activities (in the table known as activity B).

Both turnover and operational expenditures are based on underlying financial information as disclosed in note 3 'Segment information' of the consolidated financial statements and as used in the director's report. Capital expenditures are also based on underlying financial information, but there are no differences with investments based on IFRS.

There were no changes to the application of calculations compared to the previous reporting period, nor material changes to the implementation of the CAPEX plans. We consider Annex 1, articles 1.2.2.1c, 1.2.2.2., 1.2.2.3 and 1.2.3 to be not applicable to our situation, with the exception of the key information about our CAPEX plans related to our Taxonomy eligible and aligned activities. Please note that we deem the risk of double counting not applicable our eligible economic activities only relates to one activity (the aforementioned NACE code D35.12). More information on our investments, can be found in the chapter 'Ensure critical infrastructure for society' of the director's report. These investments contribute to a future green energy system, related to the EU's environmental goal of climate change mitigation. Significant research and development and innovation activities are mentioned in the 'Our performance in 2023' section of this report.

Our additional disclosures are therefore related to how these KPIs were determined and how the allocation has been performed.

Scope of sustainability reporting

For sustainability reporting purposes, TenneT consolidates data in line with the scope of our report as set out on page 205 'About this report'. The EU Taxonomy includes reporting of entities that are consolidated in the Group's consolidated financial statements, in line with the requirements of IFRS 10 'Consolidated financial statements'. As such the EU Taxonomy reporting scope is limited to our subsidiaries. Joint ventures and associates are not included for EU Taxonomy purposes as no turnover, OPEX and CAPEX are recognised in the consolidated financial statements, because of accounting under the equity method for these types of investments.

Turnover

Financial year 2023	Year			Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')									
	Code (2)	Turnover (3)	Proportion of Turnover, year 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)	Minimum safeguards (17)	Proportion of Taxonomy-aligned (A.1) or -eligible (A.2) turnover, year 2022 (18)	Category enabling activity (19)	Category transitional activity (20)
Economic activities (1)	35.12	in EUR million	%														%	E	T

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1 Environmentally sustainable activities (Taxonomy-aligned)

Transmission of electricity in the Netherlands	35.12	2,709	29.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	31.1%	E	
Transmission of electricity in Germany	35.12	6,310	68.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	66.6%	E	
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		9,019	97.8%	97.8%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	97.7%		
Of which enabling		9,019	97.8%	97.8%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	97.7%	E	
Of which transitional		-	0%	0%						Y	Y	Y	Y	Y	Y	Y	0%		T

A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)

Transmission of electricity in the Netherlands last mile to fossil power plant	24	0.3%	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3%		
Transmission of electricity in Germany last mile to fossil power plant	131	1.4%	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL								1.5%		
Turnover of Taxonomy- eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)	155	1.7%	1.7%	0%	0%	0%	0%	0%	0%								1.8%		
A. Turnover of Taxonomy-eligible activities (A.1+A.2)	9,174	99.5%	99.5%	0%	0%	0%	0%	0%	0%								99.5%		

B. TAXONOMY NON-ELIGIBLE ACTIVITIES

Turnover of Taxonomy-non-eligible activities	48	0.5%
Total (A+B)	9,222	100%

Y	Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective
N	No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective
N/EL	Not eligible, Taxonomy-non-eligible activity for the relevant environmental objective

	Proportion of turnover / Total turnover	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	97.8%	99.5%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

CAPEX

Financial year 2023	Year			Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')						Proportion of Taxonomy-aligned (A.1) or -eligible (A.2) CAPEX, year 2022 (18)	Category enabling activity (19)	Category transitional activity (20)		
	Code (2)	CAPEX (3)	Proportion of CAPEX, year 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)				Minimum safeguards (17)	
Economic activities (1)																				
		in EUR million	%															%	E	T

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1 Environmentally sustainable activities (Taxonomy-aligned)

Transmission of electricity in the Netherlands	35.12	2,956	36.3%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	33.8%		
Transmission of electricity in Germany	35.12	5,192	63.7%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	66.0%	E	
CAPEX of environmentally sustainable activities (Taxonomy-aligned) (A.1)		8,148	100%	100%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	99.8%		
Of which enabling		8,148	100%	100%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	99.8%	E	
Of which transitional		-	0%	0%						Y	Y	Y	Y	Y	Y	Y	0%		T

A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)

Transmission of electricity in the Netherlands last mile to fossil power plant	-	0%	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
Transmission of electricity in Germany last mile to fossil power plant	-	0%	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
CAPEX of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		-	0%	0%	0%	0%	0%	0%	0%								0%		
A. CAPEX of Taxonomy-eligible activities (A.1+A.2)		8,148	100%	0%	0%	0%	0%	0%	0%								99.8%		

B. TAXONOMY NON-ELIGIBLE ACTIVITIES

CAPEX of Taxonomy-non-eligible activities	3	0%
Total	8,151	100%

	Proportion of CAPEX / Total CAPEX	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	100%	100%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

Y Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective
N No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective
N/EL Not eligible, Taxonomy-non-eligible activity for the relevant environmental objective

OPEX

Financial year 2023	Year			Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')						Proportion of Taxonomy-aligned (A.1) or -eligible (A.2) OPEX, year 2022 (18)	Category enabling activity (19)	Category transitional activity (20)		
	Code (2)	OPEX (3)	Proportion of OPEX, year 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)				Minimum safeguards (17)	
Economic activities (1)																				
		in EUR million	%															%	E	T

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1 Environmentally sustainable activities (Taxonomy-aligned)

Transmission of electricity in the Netherlands	35.12	1,475	26.9%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	Y	31.5%	E	
Transmission of electricity in Germany	35.12	3,971	72.5%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	Y	67.9%	E	
OPEX of environmentally sustainable activities (Taxonomy-aligned) (A.1)		5,446	99.4%	99.4%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	Y	99.4%		
Of which enabling		5,446	99.4%	99.4%	0%	0%	0%	0%	0%	Y	Y	Y	Y	Y	Y	Y	Y	99.4%	E	
Of which transitional		-	0%	0%						Y	Y	Y	Y	Y	Y	Y	Y	0%		T

A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)

Transmission of electricity in the Netherlands last mile to fossil power plant	8	0.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL									0.2%		
Transmission of electricity in Germany last mile to fossil power plant	22	0.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	N/EL									0.4%		
OPEX of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)	30	0.6%	0.6%	0%	0%	0%	0%	0%	0%									0.6%		
A. OPEX of Taxonomy-eligible activities (A.1+A.2)	5,476	100%	100%	0%	0%	0%	0%	0%	0%									100%		

B. Taxonomy non-eligible activities

OPEX of Taxonomy-non-eligible activities	1	0%
Total	5,477	100%

Proportion of OPEX / Total OPEX

	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	99.4%	100%
CCA	0%	0%
WTR	0%	0%
CE	0%	0%
PPC	0%	0%
BIO	0%	0%

Y Yes, Taxonomy-eligible and Taxonomy-aligned activity with the relevant environmental objective
N No, Taxonomy-eligible but not Taxonomy-aligned activity with the relevant environmental objective
N/EL Not eligible, Taxonomy-non-eligible activity for the relevant environmental objective

Accounting policy

EU Taxonomy Turnover (page 215)

Turnover for taxonomy-eligible activities (A. Taxonomy - eligible activities)

All regulated revenues are eligible to the EU Taxonomy turnover.

Determination of numerator for taxonomy – aligned turnover

All regulated revenues are aligned to EU Taxonomy, except the other revenues stream and the total share of the direct connections between our substation or grid and the network and a power production plant that is more greenhouse gas intensive than 100 gCO₂e/kWh measured on a life cycle basis. This turnover is excluded from the final calculation to determine the reporting metrics related to this regulation and this turnover is disclosed under A.2. Taxonomy-eligible but not environmentally sustainable activities.

Determination of denominator for taxonomy-aligned turnover

Total turnover as included in note 3 'Segmenting information'.

EU Taxonomy CAPEX (page 216)

CAPEX for taxonomy-eligible activities (A. Taxonomy - eligible activities)

All regulated investments are eligible to the EU Taxonomy CAPEX.

Determination of numerator for taxonomy - aligned activities

All investments are related to new connections to green electricity producers or other parts of the grid that are needed to transmit green electricity. The amount is based on the regulated investments and additions to the right-of-use assets, reference is made to the table below.

Determination of denominator for taxonomy - aligned activities

Total of the investments and the right-of-use assets additions, reference is made to the next table.

(EUR million)	TSO NL	TSO DE	Regulated	Non-regulated	Total
Investments (note 3)	2,948	4,779	7,727	3	7,730
Right-of-use assets (note 10)	8	413	421	-	421
Total EU Taxonomy CAPEX	2,956	5,192	8,148	3	8,151

Since we do not have any investments related to fossil power plants we have no CAPEX disclosed under A.2. Taxonomy-eligible but not environmentally sustainable activities.

EU Taxonomy OPEX (page 217)

OPEX for taxonomy-eligible activities (A. Taxonomy - eligible activities)

Based on the frequently asked questions from October 2022 (Commission Notice on the interpretation of the Disclosures Delegated Act from October 2022) and December 2022 (Second Draft Commission Notice on interpretation and implementation EU Taxonomy Climate Delegated Act from December 2022), the OPEX category is closely related to maintenance and repair and can include the following costs for: maintenance material, cost of employee repairing a machine, cost of employee cleaning a factory, IT dedicated to maintenance. In view of the above, TenneT has included grid related expenses in calculating the OPEX. This methodology has not been changed compared to our Integrated Annual Report 2022.

All regulated grid expenses are eligible to the EU Taxonomy OPEX.

Determination of numerator for taxonomy - aligned activities OPEX

All regulated grid expenses are aligned to EU Taxonomy, except the total share of the direct connections between our substation or grid and the network and a power production plant that is more greenhouse gas intensive than 100 gCO₂e/kWh measured on a life cycle basis. These OPEX are excluded from the final calculation to determine the reporting metrics related to this regulation and are disclosed as OPEX under A.2. Taxonomy-eligible but not environmentally sustainable activities.

Determination of denominator for taxonomy - aligned activities OPEX

All grid expenses as included in note 3 'Segmenting information'.

Glossary

Power units

- Power is energy per unit of time
- Power output is measured in watts (W)
- 1 kW (kilowatt) = 1,000 W
- 1 MW (megawatt) = 1,000 kW
- 1 GW (gigawatt) = 1,000,000 kW

Energy units

- Energy is power multiplied by time
- 1 kWh (kilowatt hour) = 1 kW in one hour
- 1 MWh (megawatt hour) = 1,000 kWh
- 1 GWh (gigawatt hour) = 1,000,000 kWh
- 1 TWh (terawatt hour) = 1,000,000,000 kWh

Weight units

- ktonnes (kilotonnes) = 1,000 tonnes
- Mt or Mtonnes (megatonnes) = 1,000,000 tonnes

Voltage

- 1 kV (kilovolt) = 1,000 volts (V)

ABP – Algemeen Burgerlijk Pensioenfonds

ABP is the civil service pension fund for government, education and energy employees in the Netherlands.

AC – Alternating current

In alternating current (AC), the flow of electricity periodically reverses direction. By contrast direct current (DC), electricity only flows in one direction. AC is used to transport electricity over relatively shorter distances and DC longer ones.

ACER – Agency for the Cooperation of Energy Regulators

The European network organisation for energy regulators. It has a key role in the integration of European electricity and gas markets, providing a framework for co-operation at EU level and regulatory certainty.

ACM – Autoriteit Consument & Markt

Dutch national regulatory authority.

Adjusted FFO – Adjusted funds from operations

Profit for the year plus depreciation, amortisation and impairments minus gain/loss on the disposal of assets minus capitalised interest on assets under construction, plus interest on provisions, minus 50% of Hybrid interest.

Adjusted FFO/net debt

Adjusted funds from operations divided by net debt.

Blockchain

The digital process of verifying and documenting the performance of distributed flexible devices. Blockchain is suited to connecting multiple parties and large numbers of distributed computed nodes and enabling them to undertake joint action in a scalable, transparent and trusted network.

BNetzA – Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen

German national regulatory authority.

BritNed

The 260 km-long high-voltage direct current BritNed cable has a capacity of 1,000 MW and connects the Dutch and British electricity grids.

CAPEX – Capital expenditure

Capital expenditure (CAPEX) is the amount spent on acquiring or improving long-term assets. Its benefits are enjoyed over a long period time, not only in the current year. CAPEX is of a non-recurring nature and results in the acquisition of permanent assets.

Carbon footprint

The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO₂).

CGU – Cash-generating unit

A cash-generating unit is the smallest group of assets that independently generates cash flow and whose cash flow is largely independent of the cash flows generated by other assets.

CIP – Copenhagen Infrastructure Partners

Copenhagen Infrastructure Partners is a fund management company that is joined between four senior partners and PensionDenmark.

CO₂ – Carbon dioxide

Carbon dioxide is a greenhouse gas formed by the burning of carbon-based fuels. Its concentration in the atmosphere is rapidly increasing, leading to global warming.

COBRACable

A 275 km-long high-voltage direct current cable that is under construction to connect the Dutch and Danish electricity grids. It will have a capacity of 700 MW.

COSO – Committee of Sponsoring Organisations of the Treadway Commission

COSO has established the common internal control model against which companies and organisations assess their control systems.

CP programme – Commercial paper programme

A commercial paper is a flexible short-term debt instrument that is issued directly to the market with different maturities and is offered continuously.

CPI index

A consumer price index measures changes in the price level of a weighted average market basket of consumer goods and services purchased by households.

CSR – Corporate social responsibility

Corporate social responsibility relates to the socially responsible business practices of a company, balancing people, planet and profit.

CSRD – Corporate Sustainability Reporting Directive

The objective of the proposed CSRD is to improve sustainability reporting and ensure it is brought into a company's management report to better leverage the potential of the European single market and to contribute to the transition to a fully sustainable and inclusive economic and financial system in line with the European Green Deal and the UN Sustainable Development Goals (SDGs).

Cross-border TSO

A cross-border TSO is a TSO that operates in more than one country.

CTA - Contractual Trust Arrangements

A contractual trust arrangement is essentially a form of company pension fund where the fund's assets have been transferred to a legal entity separate from the company.

DBO - Defined Benefit Obligation

A defined benefit obligation pension plan is a type of pension plan in which an employer/sponsor promises a specified pension payment, lump-sum or combination thereof on retirement that is predetermined by a formula

based on the employee's earnings history, tenure of service and age, rather than depending directly on individual investment returns.

DC – Direct current

In direct current (DC), the flow of electricity is only in one direction. In alternating current (AC), the electricity flows periodically reverses direction. DC is used to transport electricity over relatively longer distances and AC over shorter ones.

DSO – Distribution system operator

A regional electricity distribution company, that is connected with end users and is responsible for providing (1) power distribution services, by constructing and maintaining a robust high-voltage grid, and (2) facilitating a smooth functioning, liquid and stable electricity market.

E-wet – Elektriciteitswet 1998

The Dutch electricity law.

EBIT – Earnings before interest and tax

Earnings for the period before income tax expense and interest payments are deducted.

EBITDA – Earnings before interest, tax, depreciation and amortisation

Earnings for the period before income tax expense, interest payments depreciation and amortisation are deducted.

EC – European Commission

The European Commission is the executive of the European Union and promotes its general interest.

ECL - Expected Credit Loss

Expected Credit Loss is the probability-weighted estimate of credit losses (i.e., the present value of all cash shortfalls) over the expected life of a Financial Instrument.

EEG – Erneuerbare-Energien-Gesetz

German Renewable Energy Act, designed to govern the preferred supply of electricity from renewable sources into the grid with guaranteed, fixed minimum producer prices. It is intended to serve and protect the climate and is one of several statutory provisions aimed at reducing Germany's dependence on fossil fuels such as oil, natural gas or coal, and nuclear power.

EIB – European Investment Bank

The European Investment Bank is one of the key financial institutions of the EU. It is the only bank owned by and representing the interests of the EU member states, providing financing for sustainable investment projects that contribute to furthering EU policy objectives.

EIR - Effective Interest Rate

The effective interest rate is the interest rate on a loan or financial product restated from the nominal interest rate and expressed as the equivalent interest rate if compound interest was payable annually in arrears.

EMTN – Euro medium-term note

A flexible medium-term debt instrument that is issued directly to the market with different maturities and is offered continuously rather than all at once like a bond issue.

Energinet

Energinet is the Danish TSO that TenneT is partnering with to build the COBRACable between the Netherlands and Denmark. Energinet.dk is also participating in the development of the North Sea Wind Power Hub.

EnWG – Energiewirtschaftsgesetz

The German electricity law.

ENTSO-E – European Network of Transmission System Operators for Electricity

ENTSO-E is the organisation of transmission system operators at a European level, representing 39 TSOs from 35 countries. Its mission is to promote important aspects of energy policy, especially integrating renewable energy and the completion of an internal energy market.

Equigy B.V.

Together with TenneT (Germany and the Netherlands), Transpower (Germany), Swissgrid (Switzerland) and Terna (Italy), four of the largest European transmission system operators are now jointly developing a cross-border blockchain platform - Equigy. This will enable millions of European households and owners of e.g. electric vehicles to actively offer the flexible capacity of their cars and house batteries on the energy markets to stabilise the electricity system and thus earn money from the energy transition.

ESG ratings

ESG ratings assess environmental, social and governance information of TenneT.

EU – European Union

The European Union (EU) is a political-economic union of 28 member states located in Europe.

Flexumers

Energy consumers simultaneously acting as producers

FTE – Full-time equivalent

Full-time equivalent is a unit that measures work by converting workload hours into the number of people required to complete that task.

Gasunie – N.V. Nederlandse Gasunie

Gasunie is a European gas infrastructure company that transports natural gas and green gas in the Netherlands and the northern part of Germany. Gasunie is participating in the development of the North Sea Wind Power Hub.

GIS – Gas insulated switchgear

A switchgear insulated via SF₆ gas or other gasses.

Green (hybrid) bonds

The proceeds of the green bonds are used to finance, refinance and/or invest in projects relating to the transmission of renewable electricity from offshore wind power plants into the onshore electricity grid using direct current technology or alternating current technology.

Green hybrid bonds are perpetual bonds without an end-date.

GRI – Global Reporting Initiative

The Global Reporting Initiative is a non-profit organisation that promotes sustainability and produces global standards for sustainability reporting.

Helaba – Helaba Pension Trust e.V.

Helaba Pension Trust e.V. is a subsidiary of German bank Landesbank Hessen-Thüringen and holds a part of the assets of the German pension plan.

HGRT – Holding des Gestionnaires de Réseaux de Transport d'Électricité S.A.S.

Holding des Gestionnaires de Réseaux de Transport d'Électricité S.A.S. is a holding company of EPEX SPOT power exchange.

HR – Human resources

Our HR department aims to make a distinctive contribution to TenneT's position as a leading TSO by attracting, recruiting and retaining qualified staff, as well as by creating a healthy and stimulating working environment.

HVDC – High-voltage direct current

A high-voltage, direct current system can transmit bulk electricity over longer distances than an alternating current system and with lower grid losses. As such, HVDC is used for linking offshore wind farms to the onshore grid and for our Interconnectors NorNed to Norway, BritNed to the UK and COBRACable to Denmark and NordLink to Norway.

IAS - International Accounting Standards

International Accounting Standards (IAS) are older accounting standards issued by the International Accounting Standards Board (IASB), an independent international standard-setting body based in London. The IAS were replaced in 2001 by International Financial Reporting Standards (IFRS).

ICF – Internal control framework

Framework for the set of internal controls, to provide reasonable assurance on the reliability of our internal and external reporting.

IFRIC - International Financial Reporting Interpretations Committee

IFRIC Interpretations are developed by the IFRS Interpretations Committee (previously the International Financial Reporting Interpretations Committee, IFRIC) and are issued after approval by the International Accounting Standards Board (IASB).

IFRS – International Financial Reporting Standards

The internationally prescribed and recognised reporting guidelines.

IIRC – International Integrated Reporting Council

The International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, the accounting profession, academia and NGOs. The coalition promotes communication about value creation as the next step in the evolution of corporate reporting. Together with the Sustainability Accounting Standards Board (SASB) the IIRC formed the Value Reporting Foundation.

ISS ESG

ISS ESG is a sustainability rating agency and external assessor for benchmarking CSR reports.

KfW – Kreditanstalt für Wiederaufbau

KfW is the Reconstruction Credit Institute development bank owned by the German government.

KWK-G – Kraft-Wärme-Kopplungs-Gesetz

The German Combined Heat and Power Act.

LEAN

The core idea of LEAN is to maximise customer value while minimising waste. Simply, LEAN means creating more value for customers with fewer resources. The principles of LEAN were developed by the Japanese car manufactory Toyota.

LoR – Letter of Representation

A Letter of Representation is signed by the management of the Group and/or performance unit to attest to the accuracy of the financial statements.

Moody's

Moody's Investors Service provides credit ratings, research, and risk analysis.

Net debt

Gross debt minus cash and cash equivalents at free disposal plus lease liabilities plus net employee defined benefit obligation plus 50% of hybrid securities.

Netbeheer Nederland

Netbeheer Nederland is the association in the energy sector representing the interests of national and regional electricity and gas network operators in the Netherlands.

NGO – Non-governmental organisation

A non-governmental organisation is a voluntary citizens' group that is neither a government initiative nor a conventional for-profit business.

NOKA – DC Nordseekabel GmbH & Co. KG

NOKA is jointly owned by TenneT and German development bank KfW. It is responsible for financing and building the German part of the NordLink cable.

NorNed

NorNed is a 580-kilometre long high-voltage direct current submarine power cable between Fedaa in Norway and the seaport of Eemshaven in the Netherlands, which interconnects both countries electrical grids.

NordLink

TenneT is jointly developing the NordLink interconnector with its project partners, the Norwegian TSO Statnett and German development bank KfW. With an overall transmission capacity of 1,400 MW, the subsea cable will run between Tonstad in the South of Norway and Wilster in Northern German.

NSWPH – North Sea Wind Power Hub

The consortium of the North Sea Wind Power Hub programme has joined forces to realise climate goals. The consortiums work is based on research, stakeholder interaction and experience from earlier projects. Partners in the consortium are Energinet, Gasunie and TenneT.

OCI - Other comprehensive Income

Other comprehensive income comprises items of income and expense (including reclassification adjustments) that are not recognised in profit or loss as required or permitted by other IFRSs.

OECD – Organisation for Economic Co-operation and Development

The Organisation for Economic Co-operation and Development is an intergovernmental economic organisation with 36 member countries, founded in 1961 to stimulate economic progress and world trade.

OPEX – Operational expenditure

Operating expenditure (OPEX) is the expense that a company incurs as a result of its normal business operations.

OPEX deficit

The difference between our operation expenditure and the reimbursement for these costs.

OWF – Offshore wind farm operators

Offshore wind farms are constructed in bodies of water to generate electricity from wind.

PBA - Project Budget Approval

The process of formally identifying and approving the project budget, prior to the start of the project.

RCF – Revolving credit facility

A line of credit where TenneT pays a commitment fee and can then use the funds as and when needed.

RES – Renewable Energy Sources

All sources of renewable energy including sunlight, wind, tides, waves, biomass and geothermal heat.

ROIC – Return on invested capital

Underlying EBIT Group expressed as a percentage of the average underlying invested equity plus loans and bank overdrafts minus cash at free disposal during the year.

S&P – Standard & Poors

Standard & Poors provides credit ratings, research, and risk analysis.

SASB – Sustainability Accounting Standards Board

The Sustainability Accounting Standards Board is a non-profit organisation that sets financial reporting standards. SASB was founded in 2011 to develop and disseminate sustainability accounting standards. Together with the IIRC, the SASB formed the Value Reporting Foundation.

SBTi – The Science Based Targets initiative

The SBTi is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). The SBTi call to action is one of the We Mean Business Coalition commitments.

SCL – Safety Culture Ladder

TenneT uses the Safety Culture Ladder (SCL) as a tool to increase safety awareness and enhance safety culture, not only within our own organisation but also for our contractors. The Safety Culture Ladder is a requirement in the selection phase of a tender as described in the 'Safety by Contractor Management' programme.

SDG – United Nations Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. The 17 aspirational 'global goals' with 169 targets between them were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development which set out a 15-year plan to achieve the Goals.

SF₆ – Sulphur hexafluoride

An inorganic, colourless, odourless and non-flammable greenhouse gas that is used in the electricity industry to insulate high-voltage circuit breakers, switchgear and other electrical equipment.

SHE – Safety, Health & Environment

SHE is the set of activities relating to safety, health & environment.

SIC - Standard Interpretation Committee

SIC Interpretations were previously issued by the Standard Interpretations Committee (SIC), and were subsequently endorsed by the International Accounting Standards Board (IASB). The IFRS Interpretations Committee has reissued Interpretations in this series if it considers it necessary.

SLA – Service level agreement

A service-level agreement is an agreement between two or more parties, where one is the customer and the others are service providers.

SuedLink

A DC connection to transport electricity generated in the north of Germany to the South.

SuedOstLink

A DC connection to transport electricity generated in north of Germany to the South-East.

Sustainalytics

Sustainalytics is a sustainability ratings agency and external assessor for benchmarking CSR reports.

TRIR – Total recordable incident rate

The total recordable incident rate is the number of total recordable incidents per million hours worked. Recordable incidents are fatalities, lost work day cases, restricted work day cases and medical treatment cases.

TSCNET

TSCNET Services is one of Europe's Regional Security Coordinators (RSCs). The company based in Munich, renders integrated services for power transmission system operators (TSOs) and their control centres to maintain the operational security of our electricity system – 24 hours a day, seven days a week.

TSO – Transmission system operator

A transmission system operator transports electricity at national or regional level from producers to distributors. A TSO is responsible for providing (1) power transmission services, by constructing and maintaining a robust high-voltage grid, (2) system services, by maintaining the balance between supply and demand of electricity 24/7 and (3) facilitating a smooth functioning, liquid and stable electricity market.

UN – United Nations

An international organisation formed to promote international peace, security, and co-operation under the terms of the charter signed by 51 founding countries in San Francisco in 1945.

UNGC – United Nations Global Compact

A call from the UN to companies to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals.

VKE – Versorgungskasse Energie VVaG

Versorgungskasse Energie VVaG is pension fund for energy mutuals and a subsidiary of E.ON SE. It holds a part of the assets of the German pension plan.

WACC – Weighted average cost of capital

The WACC is the rate that a company is expected to pay on average to all its capital providers to finance its assets.

Workforce

All internal and external people who works for TenneT and where TenneT is responsible for their safety relating to our work.

SWOT Analysis

In the section 'Our performance in 2023' of our report, we elaborated on TenneT's performance, strategic risks and the outlook for 2024. Our SWOT provides an insight into our company's opportunities and strengths, as well as threats and weaknesses, providing context to our stakeholders.

SWOT Analysis

Strengths

- High level of security of supply
- Technical innovations
- Leader in European market integration in North-West Europe
- First cross-border TSO in Europe and a favorable corporate reputation amongst stakeholders
- Stable credit rating
- First mover attitude in shaping the grid of the future

Weaknesses

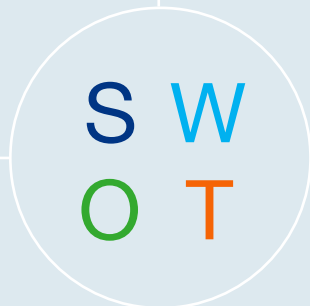
- Dependency on the availability of suppliers
- Grid extensions, customer connections and congestion management
- Increasing OPEX costs
- Maintenance pressure aging assets

Opportunities

- Standardisation of assets and components
- Attractive employer
- More favorable laws to support the energy transition
- System integration / sector coupling (a.o. hydrogen)
- Usage of artificial intelligence applications

Threats

- Supply chain disruptions and scarcities
- Volatile European grid
- Unavailability of new hires
- Cyber and physical security threat
- Changes in national or European political landscape
- Affordability of the energy transition
- Not having the capacity to deliver large projects in time



Key figures: five-year summary

(based on underlying figures)

	2023	2022	2021	2020	2019
Energise our people and organisation					
TRIR	4.5	4.9	5.8	4.1	4.8
Absentee rate NL	3.9	3.7	3.1	2.7	3.4
Absentee rate DE	3.4	4.1	2.6	2.5	2.8
Diversity % female inflow to total inflow	32%	33%	31%	33%	31%
Internal headcount	6,937	5,930	5,168	4,321	3,768
Secure supply today and tomorrow					
Investments (in) tangible fixed assets	7,730	4,493	3,969	3,412	3,012
Grid availability (onshore)	99.99993%	99.99963%	99.99999%	99.99995%	99.99982%
Interruptions (onshore)	14	11	17	4	14
Interconnectors	17	17	17	15	15
Drive the energy transition					
Percentage greened of our carbon footprint	33%	35%	69%	62%	27%
Safeguard our financial health					
Net debt	20,899	17,551	15,584	14,004	10,815
Underlying EBIT group	1,817	1,210	834	910	768
Underlying result for the year	1,071	671	493	516	401
Adjusted ROIC	5.8%	4.9%	4.2%	5.1%	5.1%
Adjusted FFO/Net debt	11.6%	11.1%	10.5%	11.3%	12.9%
IFRS EBIT group from continuing operations	172	-796	-275	1,356	1,077
IFRS result from continuing operations	67	-590	-320	837	630
IFRS result from discontinuing operations	644	-289	-	-	-
IFRS result	711	-879	-320	837	630

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We look forward to receiving your feedback on this report.

Please send an email.

Disclaimer

‘We’, ‘TenneT’, ‘TenneT Holding’, ‘the Group’, ‘the company’ or similar expressions are used in this report as a synonym for TenneT Holding B.V. and its subsidiaries.

Parts of this report contain forward-looking information. These parts may include unqualified statements on future operating results, government measures, the impact of other regulatory measures on the activities of TenneT as a whole, TenneT’s shares and those of its subsidiaries and joint-ventures in existing and new markets, industrial and macro-economic trends and TenneT’s performance in these. Such statements are preceded or followed by or contain words such as ‘believes’, ‘expects’, ‘anticipates’ or similar expressions. These forward-looking statements are based on current assumptions concerning future activities and are subject to known and unknown factors, and other uncertainties, many of which are beyond TenneT’s control, so that future actual results may differ significantly from these statements.

All financial information in this Integrated Annual Report is reported in millions of euro, unless stated otherwise. As a result, small rounding differences may occur.

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable than ever before. In our role as the first cross-border Transmission System Operator (TSO) we design, build, maintain and operate over 25,000 km of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 17 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with a turnover of EUR 9.2 billion and a total asset value of EUR 45 billion. Every day more than 8,300 people working at TenneT take ownership, show courage and make and maintain connections to ensure that the supply and demand of electricity is balanced for over 43 million people.

Together, we are lighting the way ahead



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