



Manon van Beek
Chief Executive Officer



Tim Meyerjürgens
Chief Operating Officer



Maarten Abbenhuis
Chief Operating Officer



Arina Freitag
Chief Financial Officer

Letter from the Board

The publication of our annual report comes at a time of great uncertainty in the world due to developments in Ukraine. Apart from the consequences this may have for the European energy system, the war in Ukraine has a big impact on all of us, also on an individual level. We sympathise deeply with all those affected by the imposed violence.

Responsible Growth

2021 was what one might call a stop-and-go year for TenneT; exciting, surprising, strenuous, challenging and with several twists and turns. Navigating the COVID-19 pandemic required constant adjustment, while at the same time TenneT needed to work at full capacity to meet the demands of a dynamic and fast-growing sustainable energy system. Whatever the external circumstances, TenneT remained steadfast in our mission: keeping the lights on, today and in the future.

The Dutch and German governments have set ever more ambitious CO₂ reduction targets, requiring a steep increase in renewable energy. With grids being the backbone of the energy transition, TenneT needs to take the next leap in its growth agenda and corresponding transformative priorities. TenneT stepped up these efforts in 2021, as we work towards our goal of realising a green, integrated onshore and offshore grid for a zero CO₂ economy. Like a tree with strong roots, TenneT aims to build a system that is prepared for and can deal with the fluctuating supply of weather-dependent energy sources that change with the seasons.

To achieve this, TenneT is following a policy of responsible growth. Just as a tree or a forest is a vital part of the ecosystem, so TenneT's work is crucial for the energy system. Both flourish when they are firmly grounded on solid foundations. They need to stay connected with their roots and to be strong but also flexible, with branches that can bend but not break. TenneT has grown substantially in the past years, accelerating the energy transition and moving out of its comfort zone. But where comfort zones end, growth starts. And because growth and comfort do not co-exist easily, we need to innovate and collaborate in order to stay successful.

Growing safely

Safety is a top priority for us, and we are committed to ensuring our work is executed safely and with limited incidents. However, during 2021, three fatalities occurred among our contractors' employees while working on our projects. The loss of these colleagues deeply saddens us, and our sympathy goes out to their families. These tragic accidents re-emphasise the many risks associated with our daily work and further strengthen our belief that every safety incident is one too many. We strive for zero harm and want all our employees, and all the employees of our contractors, to come home safely, every day. To further embed a stringent safety culture at TenneT and maintain this focus for years to come, we introduced additional safety measures and rules during 2021 and also launched a new leadership programme, *Safety needs our energy*.

Green accelerators

Our strategy is rock solid. Based on the four pillars of energising our people and organisation, securing supply today and tomorrow, driving the energy transition and safeguarding our financial health, we believe we are well on track to connect everyone with a brighter energy future. The strategy underlines the importance of working collaboratively with partners across the European energy system and recognises that there are three accelerating external developments that affect TenneT at its core.

First, external expectations are rapidly increasing. The ambitious climate policy goals for fast decarbonisation have increased the pace of the energy transition. In short: this could implicate that we need to accomplish twice as much in half the time.

Second, the energy system is getting more complex, volatile and interdependent and with more renewable energy being fed into the grid, often in remote locations, planning and steering the system becomes more dynamic every day. Despite these challenges, our grid is still expected to meet a hard availability target of 99.99%.

Lastly, TenneT – along with other players in the energy system – faces increasing competition for people and materials. The energy transition requires the deployment of tens of thousands of new talents as well as a huge demand for raw materials, components and finished goods.

Choices for a feasible path

To double our output towards an annual investment level of at least EUR 6 billion by 2025 will require us to grow towards 10,000 employees. Annual investments could further rise if planning and approval periods are shortened and supply

chain delivery and talent hires can be ensured. We are convinced this quantum leap can only succeed if we make responsible choices, for ourselves and for the people and industries we serve. That means building an organisation that is firmly rooted and well-grounded in society and is structured with the right delivery capabilities. With this approach, we can ensure a stable and secure supply of electricity in a system that will largely rely on weather-dependent energy sources. We are pleased that we were able to achieve a very high grid availability of 99.99999% in 2021.

We are convinced that responsible growth must be the guiding principle for TenneT and all stakeholders in our value chain. By making the right choices, TenneT will embark on an ambitious and feasible pathway so that we - together with partners, suppliers, policy-makers and colleagues - can build, maintain and operate a high-voltage electricity grid that supports a green energy future.

Together responsible for green growth

As CO₂ reduction targets become more ambitious, we must ensure that the electricity system can facilitate these developments. To achieve this, TenneT requires streamlined and modern planning and approval procedures, as well as political support for grid reinforcements and expansion at all levels. It is encouraging to see that the newly formed governments in Germany and the Netherlands are paying attention to this in their coalition agreements. Furthermore, we also need the right legislative and regulatory environment to transform the energy system: forward-looking regulation fostering innovation is instrumental to speed up progress. Market parties are waiting for frameworks that encourage them to invest heavily in renewables, flexible electricity supply and demand and other grid innovations.

Collaboration and collective responsibility will determine the success of the energy transition. TenneT may be an important link in the system, but sustainable growth, green jobs and investments in innovations will only be achieved together with our stakeholders, alongside European and national political decision-making and regulations. We are committed to advising our partners and stakeholders on technology and the systemic impact of the energy transition, on market integration and security of supply.

Proud of our sustainable progress

We are proud of our contributions to green growth in 2021. Never has TenneT invested so much in the expansion and maintenance of its grids. We were able to enlarge the onshore grid with 118 kilometres of high-voltage connections in close collaboration with our suppliers and contractors. Offshore, we realised 623 kilometres of new

connections and introduced impactful innovations to transport electricity to the shore faster and on a larger scale. Together with our suppliers, we are planning and developing offshore grid connection systems, each with a capacity of 2 gigawatts (GW). This is more than two or three times the size of our existing systems in Germany and the Netherlands, enabling the supply of electricity to the equivalent of two million households. We expect to build at least six of these 2 GW connections by 2030, three in Germany and three in the Netherlands.

We are already delivering critical projects to drive the energy transition in Europe. For example, commercial operations of our NordLink cable began in 2021, connecting Germany and Norway through a 623-kilometre subsea cable. When electricity prices in Germany are high, because of little wind or sun, consumers could profit from lower-priced hydroelectric power from Norway. This 'green link' can supply more than 3.6 million German households with renewable energy.

Green and sustainable financing

Our large-scale investment programme requires broad, sustainable and timely access to financing with a good balance between equity and debt to maintain our solid credit ratings. To that end, we are very pleased that the Dutch government announced to contribute EUR 4.25 billion of equity capital for our activities in the Netherlands. For TenneT's equity capital requirements in Germany the options are still being explored.

TenneT is confident that a solution will be reached in 2022 in coordination with its shareholder, the Ministry of Finance. The (social) benefits of TenneT as an integrated cross-border company are central to finding a solution.

During 2021, access to the debt financing markets remained exceptionally good. Last May, TenneT issued its largest ever (EUR 1.8 billion) and first green triple tranche Euro bond transaction, reinforcing TenneT's top-3 status as corporate issuer of sustainable, green debt financing in Europe, with currently around EUR 13 billion of green debt issued across different debt formats.

Thank you!

Our great appreciation goes to all our colleagues who gave their all in this extraordinary year. We will need them and many new colleagues in the coming years to build, maintain and operate a secure, affordable and sustainable high voltage electricity grid. 2021 was also the last year in TenneT for our Chief Financial Officer, Otto Jager. Throughout his career at TenneT, Otto not only ensured we remained a financially robust and stable company, but he was also a driving force behind the professionalisation and cultural transformation of the company, through his responsibility for our People agenda. We warmly welcome Arina Freitag as his successor as CFO, who will be vital in leading TenneT into the coming decade of record investments for the energy transition in Germany, the Netherlands and Europe.

Responsible growth



About TenneT



Our role in Europe

In years to come, 2021 could be seen as a turning point in the climate debate. In August, during a summer of wildfires, floods and other climatic extremes, UN Secretary-General António Guterres issued a “code red warning for humanity”, based on a stark assessment by The Intergovernmental Panel on Climate Change (IPCC), the world’s leading authority on climate science.

Two months later, the COP26 UN Climate Change Conference convened in Glasgow, resulting in the Glasgow Climate Accord aimed at intensifying global efforts to fight climate change worldwide. The agreement from this conference is expected to have far-reaching implications, as countries across the world come together to tackle global warming. As part of this journey, with its Green Deal, Europe aims to be the first climate-neutral continent by 2050.

The energy transition will require many changes in society. As the first cross-border European TSO, TenneT intends to play a pioneering role in the transition to a clean, circular decarbonised energy system. For many years, we have already demonstrated our active contribution to the transition towards a sustainable, reliable and affordable European energy system.

With approximately 25,000 kilometres of high-voltage connections, we ensure a secure supply of electricity to almost 43 million end-users. TenneT is also 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 contribute to integration of the energy transition in the future.

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

Challenges ahead

The urgency of climate action and the complexity of tackling this issue mean that TenneT is faced with a challenging context, consisting of interlinked and rapid developments.

Political developments

Governments are stepping up their ambitions to tackle climate change and accelerate the transition to a climate neutral economy. The European Green Deal, flanked by the “Fit for 55” package of 10 legislative proposals, is touching on a broad range of aspects that a TSO such as TenneT needs to consider. It includes the EU climate law, the EU offshore strategy, the EU sector coupling strategy and the EU taxonomy legislation.

Also the recently installed governments in the areas we serve have formulated more ambitious climate targets, as Germany aims to have 80% renewables in the electricity mix already in 2030, instead of the previous target of 65% and in the Netherlands the new cabinet announced that they are going to formalise the 55% reduction of carbon emission levels in 2030 compared to 1990 in line with the European ambition and at the same time make policies that would reduce up to 60% by 2030, 70% by 2035 and 80% by 2040. This might also impact our project portfolio as we are an important partner for these governments to realise these ambitions.

Economic developments

As economies decarbonise, we expect a global trend of strong electrification from for example industries, placing significant additional demands on our grid. This is why we need to continue and step up our extensive grid investment programme to ensure that we are able to transmit electricity from where it is generated (e.g. offshore wind farms) to where it is consumed (e.g. large industrial clusters). Significant investments are needed in every scenario we foresee to cater for the growing need in electricity.

Technical developments

The growing share of renewables in the energy mix creates new challenges. Many new production/generation facilities of renewable electricity, grow at a faster pace than the grid causing a backlog in connections and congestions on the existing grids. Another constant challenge is to keep the grid in balance as the infeed of renewable electricity is weather-related and therefore volatile and intermittent. Furthermore, as a grid operator, TenneT needs to plan for changes that can impact the energy mix early on, such as the development of green hydrogen to make economic sectors that are difficult to decarbonise sustainable.

Societal developments

Global supply chains are currently fragile: delays and shortages in various categories are observed, raw material prices are increasing and competition in the market is high for required resources. We also recognise scarcity in human resources, both internal and external. Shortage of talent combined with demographic changes such as the implications on our workforce due to an ageing society, are relevant risks for us which we actively try to mitigate.

Taking these developments into account, TenneT has a critical role to play in this impactful journey to a reliable, affordable and zero-carbon energy system. As an electricity transmission system operator, we are the backbone of the green energy transition and need to upgrade and expand our grid as well as our grid operations to serve changing energy needs. A commitment to responsible growth is guiding our approach to these challenges, alongside our purpose, principles and strategy with clear objectives.

Our purpose

To connect everyone with
a brighter energy future

Our promise

Lighting the way ahead together

Our principles



Connection



Ownership



Courage

The energy transition is a challenge that requires new ideas, new technologies and new behaviours that build on the strong foundations we have laid.

Connection

We are involved and work actively with other parties. The challenge of the energy transition requires us to do things differently and collaborate with a wide range of partners. We know that we do not have all the answers ourselves.

Ownership

We are accountable for our words, actions and decisions.

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.

Our strategy and value creation

Our strategy and value creation

TenneT is one of Europe's major investors in national and cross-border grid connections on land and at sea, bringing together the Northwest European energy markets and driving the energy transition. The energy transition is one of the most impactful challenges facing society and energy supply. To fulfil our role in the energy transition, we are working on a responsible growth based on four strategic pillars:

Strategic goals

Energise our people and organisation



With an inclusive and safe environment where people enjoy coming to work. We will build a leadership model that empowers, inspires and creates growth opportunities, so everyone can perform at their best and work as one team.

Strategic goals 2025

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

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.

Strategic goals 2025

Deliver EUR 6 billion in projects annually while securing a healthy asset base where customers can be connected within a set number of months and security of supply is at least 99.9999%.

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.

Strategic goals 2025

Realise at least 5 significant energy innovations (grid, operations, market) including an 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.

Strategic goals 2025

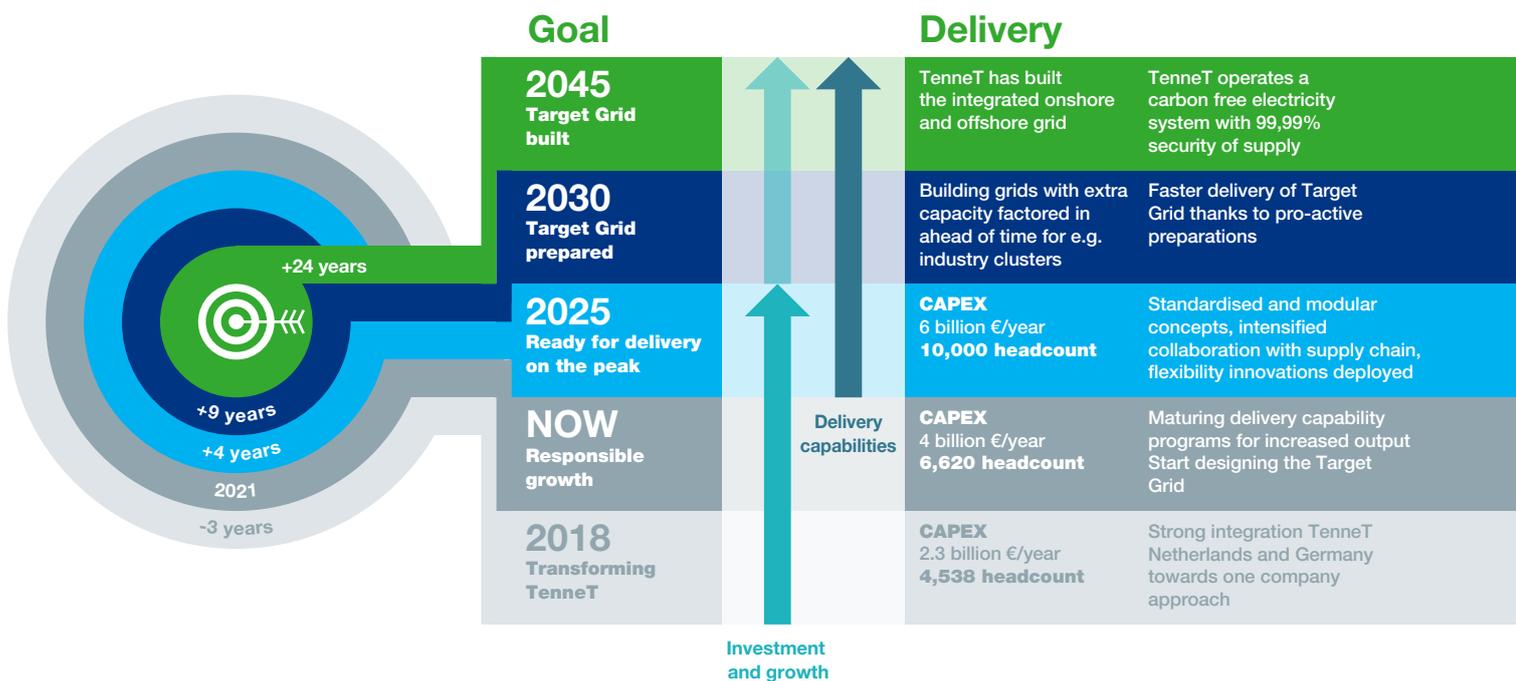
Secure sufficient equity, while achieving at least regulatory returns, to maintain our current A-/ A3 credit ratings.

Our path towards 2050

By 2050 the European Union aims to turn Europe into the world's first climate-neutral continent. Germany is on an even more ambitious path with targets to be climate-neutral by 2045. As an interim goal, the EU aims for a 55% reduction of CO₂ emissions by 2030. Although these clean-energy milestones of 2030, 2045 and 2050 seem far away to some, for TenneT they loom large on the horizon. The energy transition is moving much faster now than how infrastructure used to be overhauled or upgraded in the past decade. We need to move ahead now so we can drive the energy transition as more and more energy consumption will be electrified.

We are preparing our target grid, which will be the blueprint for a future grid that can support the energy transition for generations to come. It is prepared in stages to coincide with important climate goals in 2025, 2030 and 2045. This is not just about growing our infrastructure, but should also include smart solutions and innovative technology. As a first step, we plan to be ready to deliver at full capacity on the peak by 2025. By 2030, we plan to have a reliable backbone in place and through pro-active preparations for future transmission projects, we are in a position to move forward faster to support the next steps in the energy transition. And by 2045, we will have delivered the grid required for a climate-neutral energy system, in accordance with the Paris Agreement and the national climate goals. By then, we will also have integrated large-scale offshore and onshore renewable generation and industrial customers to meet their climate goals.

Target grid



How we create value

TenneT has an important role within the electricity supply chain and helps enable the lives of people working and living in the areas we serve. The way we create value is represented visually on the next pages, 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 inputs 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. Our inputs, through which we create impact for society, are influenced by our strategy, our purpose and our principles. All of these are described in this chapter. More information on the specific inputs, our related outputs, outcomes and impacts are disclosed in the chapter 'Our Performance in 2021'. The way we aim to create long-term value is defined alongside the six inputs from our value creation model. Here we aim to:

Deliver a high security of supply

Delivering a high security of supply in today's fast changing more volatile energy system is a growing challenge. However, thanks to TenneT's decades of experience in operating our grid, together with a vision of how the future grid and electricity markets should be designed, we are able to secure supply of electricity both today and in the future. And with this, we support the daily lives and activities of people and businesses in the areas we serve.

Ensure critical infrastructure for society

Electricity plays a vital role in the lives of our stakeholders and society as a whole. TenneT builds and maintains the high-voltage grid that is needed for this secure supply of electricity. With the materials and products we use to build and maintain our grid, such as our cables, (sub)stations, 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 sustainable workplace

We consider our employees to be our most important asset and essential to realise our ambitions. Our programmes and actions, including how we train our people and how we create an inclusive environment where people are energised to work, help us create a stable, safe and sustainable workplace.

Create value to transition to a climate neutral economy

The transition to a climate neutral economy will be essential to mitigate climate change. As a company with a key role in the energy landscape and a vision for a greener energy future, our aim is to drive the energy transition and contribute to achieving the climate targets of the Netherlands, Germany and the European Union. On the one hand, we aim to do this by contributing to a sustainable energy system, where we are able to connect everyone in the areas we serve to green electricity. On the other, we also strive to reduce the environmental impact of our operations. This is related to our use of energy sources, our work in the natural environment and the materials we need to build, operate and maintain our grid.

Secure a sustainable financial performance and investor ratings

In order to create long-term value, we are focused on maintaining a healthy financial position. Our main sources of financing are our regulatory revenue and externally raised capital, which is increasingly stemming from green financing. 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 our strong credit and ESG ratings.

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 finding solutions that will help us transition to a climate neutral economy to address and mitigate climate change. Combining experience and knowledge from different organisations around the world will help us to do so.

Stakeholders

Input

How we create value



Employees



NGOs



Governments and policy-makers



Customers



Suppliers



Regulators



Shareholders



Energy market participants



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



Energise our people and organisation



Secure supply today and tomorrow



Drive the energy transition



Safeguard our financial health



How we operate

- Enable the energy market ←
- Designing the energy system ←
- Build the electricity grid ←
- Maintain the electricity grid ←
- Operate the electricity grid ←
- Enable the core activities ←

Output



Deliver a high security of supply, see page 22

With our knowledge and experience in operating the system and following up on our ambition to further integrate European energy markets, we are able to provide a secure supply of energy. In 2021, we have been able to achieve a **99.99999%** availability of our grid. The instances we were unable to secure supply, were the result of **3** interruptions. Our knowledge, experience and vision with respect to an integrated European energy market is reflected in our grid and the **17** interconnectors that are operational.



Ensure critical infrastructure for society, see page 29

With our assets, we ensure that we are able to fulfill our core activities and tasks. We keep building and maintaining our grid to realise the critical infrastructure, which helps us drive the energy transition and supports the economic development and human wellbeing of the people that live in our service area. **We expected to invest EUR 3.9 billion in 2021, and we were able to realise EUR 4.0 billion.**



Create a sustainable workplace, see page 39

Our goal is to create a working environment where our people feel safe and valued. We strive to bring out the best in our people to help them develop themselves and organise this in a way that energises them. That is why we track our **absentee rate, which was 3.1 in the Netherlands and 2.6 in Germany in 2021**. Unfortunately we did not manage to have zero safety incidents and recorded a **Total Recordable Incident Rate (TRIR) of 5.8**.



Create value to transition to a climate neutral economy, see page 46

We want to drive the energy transition, because we believe we are able to make a significant contribution. Realising our investment programme and innovation portfolio will contribute to the climate targets in the Netherlands and Germany, which is essential on the pathway to a climate neutral economy. As of 2021, we realised a total of **8.5 GW** of offshore capacity and connecting renewable energy sources to the electricity grid in the Netherlands and Germany. At the same time, we ourselves have the firm ambition to be climate neutral as early as 2025, so that we too will contribute to part of the solution. In 2021 our (gross) carbon footprint was **2,312,139 tonnes CO₂**, which has been greened for **69.0%**.



Secure sustainable financial performance and investor ratings, see page 54

TenneT is a regulated company, that has an important societal role. That is why we strive to make choices considering the impact on societal costs. To finance our grid investments, we raise the necessary financing and meet the expectations of our capital providers. This is reflected in various ways, such as our **credit rating of A- S&P and A3 Moody's, our ROIC of 4.2 and a S&P ESG evaluation, with a score of 84 out of 100 and a classification 'strong'**.



Solve societal challenges with stakeholders and through partnerships, see page 60

We believe in the power of cooperation. Working together will help us achieve the next steps with respect to the energy transition faster and better. Furthermore, in realising our future grid, we engage with our stakeholders to consider societal objectives. That is why we also measure our reputation on a bi-annual basis. The outcome of this is a **reputation that can be classified as 'fairly strong to very strong'**.

Outcome & Impact



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



Societal impact due to availability of our grid



Avoided CO₂ emissions



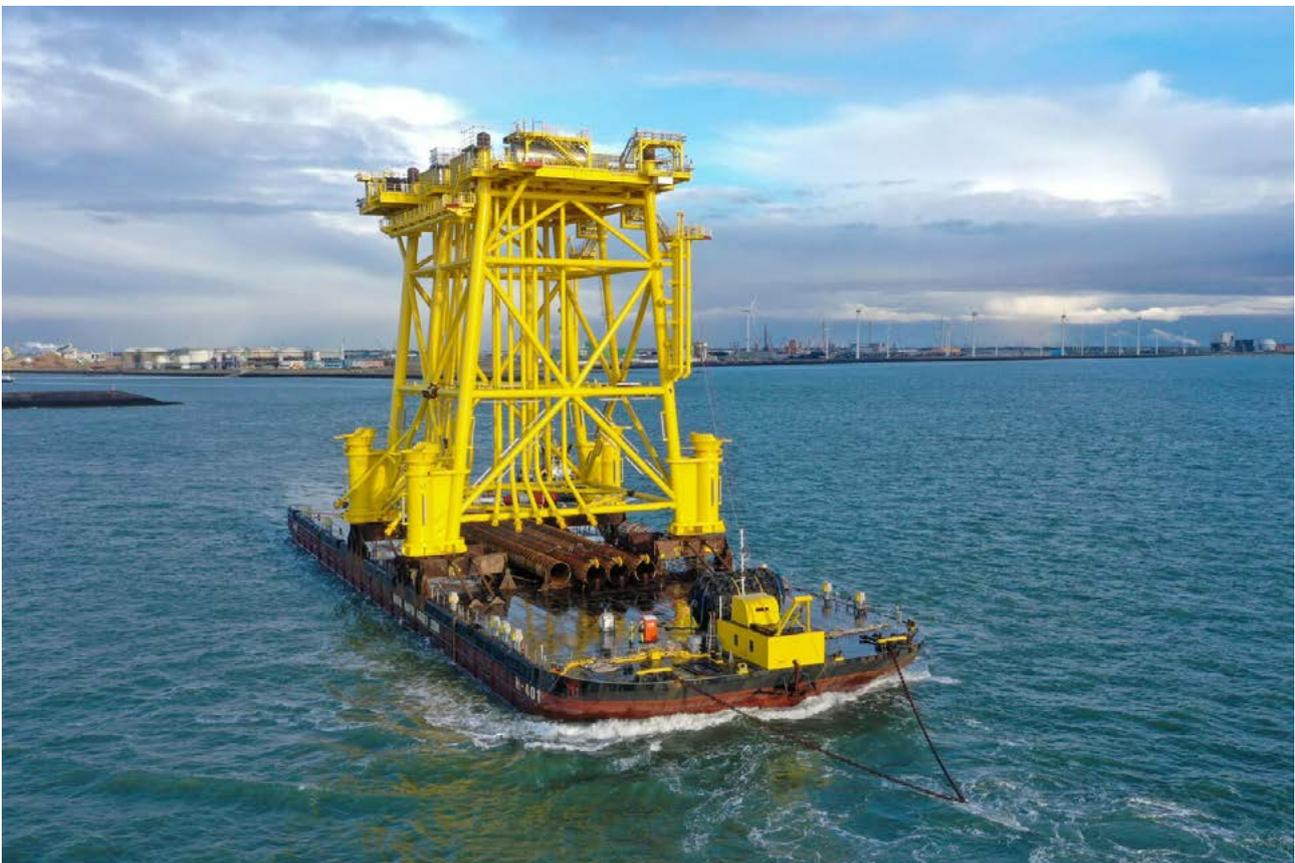
Measuring our societal impacts

Our ambition is to show our societal impacts as part of our value creation model. We have succeeded in doing so for some areas and are working to expand this model in the coming years. Disclosing an organisation's impact(s) is a relatively new area of reporting. We aim 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 showing these impacts and the way we are able to fulfil our purpose, we believe that we provide more meaningful insights for stakeholders rather than to focus on translating a variety of our company level outputs to outcomes and impacts.

In 2020, we started to show the societal impact in two important new areas: the value we create by

ensuring the availability of our grid and our progress in connecting more renewable energy to our grid. The latter is shown in the tonnes of CO₂ emissions that we have been able to avoid each year and the equivalent number of households that in theory would have been able to receive 100% green electricity that year. In 2021, we added an additional societal impact – the financial impact we have on the electricity costs of an average household in the areas we serve. As we are a regulated company, our impact on household costs is an important factor that we want to address in this report.

More information can be found in the chapters '[Deliver a high security of supply](#)', '[Create value to transition to a climate neutral economy](#)' and '[Secure sustainable financial performance and investor ratings](#)' where we included our societal impacts in these areas.



How our strategy creates value

Our Integrated Annual Report 2021 has been set up alongside the outputs of our value creation model. The image on next page shows how this is connected to our four strategic pillars and where more information about each topic can be found.

Connectivity table

Strategic pillar	Chapter	Topics in materiality matrix	Key KPI's	SDG
Overarching 	Page 2	<ul style="list-style-type: none"> Stakeholder engagement Compliance 	<ul style="list-style-type: none"> Internal engagement index Reputation survey 	
<p>Energise our people and organisation</p>	Page 39	<ul style="list-style-type: none"> Create a sustainable workplace Safety 	<ul style="list-style-type: none"> Absentee rate % female inflow Total Recordable Incident Rate 	
<p>Secure supply today and tomorrow</p>	Page 22 Page 29	<ul style="list-style-type: none"> Security of supply Responsible supply chain practices (Cyber) security Connectivity of our grid Customer relations 	<ul style="list-style-type: none"> Grid availability Investments 	
<p>Drive the energy transition</p>	Page 29 Page 46 Page 60	<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"> Sustainability performance # of GW of new flexibility # of scalable / scaled system initiatives 	
<p>Safeguard our financial health</p>	Page 54	<ul style="list-style-type: none"> Financial health 	<ul style="list-style-type: none"> Adjusted underlying EBIT ROIC Adjusted FFO/Net debt 	

Our supply chain

Our main task is to secure electricity supply to almost 43 million people that live in the areas we serve. To realise this, we transmit electricity via our high-voltage grid. We also need to design, build, maintain and operate our grid. These dimensions have their own challenges and opportunities.

First, we need to design, build and maintain a high quality, reliable, sustainable, and resilient grid that can support the energy system of the future. This requires the development of new technologies and causes an increase in demand for proven technology and skilled resources, next to raw materials (such as steel, copper and aluminium) which are manufactured or mined by third parties and used in our projects to build and maintain our assets. These assets are crucial to operate our grid. Some of the raw materials we use are scarce resources, such as virgin copper, which have an environmental impact due to their extraction. We want to be a green and responsible grid operator, taking measures to reduce our negative impacts and even creating positive impacts, wherever possible. We have formulated ambitions to become more circular and make less use of scarce resources, including virgin copper. Once our assets are commissioned, we aim to extend their useful lives through regular maintenance, which will help us to reduce the use of (raw) materials. When our assets reach the end of their lifecycle, we aim to recycle all materials or components that can be safely re-used.

Building and maintaining the energy grid of the future is a combined effort, involving thousands of people. For TenneT's employees and those employed by our partners, we strive to do this in a safe and responsible way. The nature of our work, especially where high-voltage is involved, requires the most stringent adherence to safety standards. We are proud of everyone who helps us to drive the energy transition.

However, our work involves more than designing, building and maintaining assets. We also need to operate them, by providing transmission and system services and facilitating the market. In this way, we play a pivotal role at the centre of the electricity supply chain, transmitting electricity to end-users via the grids of the distribution system operators (DSOs), which is either generated on land or at sea, or imported from or exported to neighbouring grids via cross-border interconnectors.

This electricity supply chain has changed significantly over the past decades, but TenneT has long been an established key player and important partner of governments and other key stakeholders since its founding in 1998. As the energy transition forces the system to undergo significant changes in the path towards zero-carbon emission, TenneT can play a key role in helping stakeholders in the supply chain to work together. Sharing our experience and knowledge gained from the past decades, and also learning from others, we aim to help our entire supply chain overcome the challenges ahead to deliver the energy system of the future.

TenneT in the supply chain

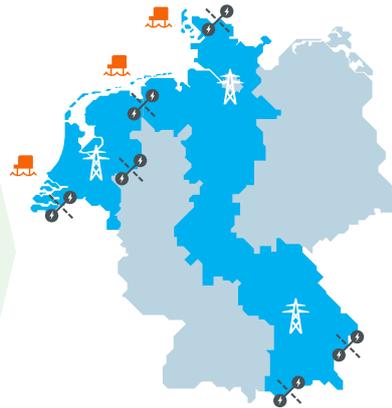
Designing, building, maintaining and operating the grid



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 when building and maintaining our grid



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



Decommissioning
In our projects, we strive to re-use our materials as much as possible or dispose them in a proper way

Generation / In-feed



Renewables
More offshore wind farms are connected to our grid



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



Renewables
Onshore, we aim to create more capacity to enable more renewables to be connected



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



Export
We transport electricity to other areas if this helps them secure supply in a consistent or more cost-efficient way



Consumers/flexusers
With a society that is gradually electrifying, we strive to supply households of electricity together with the DSOs and work together with them in finding new solutions to power society



Large industries
More and more large industries are greening their processes which results in an increasing greener electrification need. As partner for industries we therefore play an important role in the transition to a climate neutral economy

Consumption

Our stakeholders

TenneT’s vital role in the European energy sector involves strong collaboration with a wide range of partners and stakeholders. We aim to build and maintain our stakeholder relationships in the best way possible. This year, we reassessed our stakeholder landscape, as the environment we are operating in continues to change. We performed this assessment together with our business units. Although we value our relations with all our stakeholders, big or small, there are some groups that have a greater influence on us and vice versa. Our key stakeholders are summarised in the visual included below.

Every two years, we conduct a survey to assess how well we are performing in the perception of our key stakeholders. This survey was performed amongst our previous list of key stakeholders.

The most recently conducted survey resulted in the perception of TenneT’s reputation as ‘fairly strong to very strong’ and TenneT’s customer satisfaction gave an overall level of satisfaction of 85% (customers gave a score of 7 or higher).

Next to these stakeholders, we very much also value our engagement with specific project stakeholders in local communities. We are open to the concerns of people and organisations in the areas where our assets are built, and actively seek to engage with them. We hold regular stakeholder dialogues (workshops, talks, events and online sessions) where we aim to build awareness of and understanding for our work. In these interactions, we listen to the concerns of local stakeholders to see how we can address them properly. We measure our community relations efforts through stakeholder surveys.

Our stakeholders



The Sustainable Development Goals and TenneT

The Sustainable Development Goals (SDGs) were determined by the United Nations as global goals that member states should translate into national policy. The aim of the SDGs is to create a sustainable future for all people. The cooperation between governments and other important partners, such as businesses and NGOs, are key to achieving these important goals. TenneT is committed to the SDGs and in 2021 we re-assessed which SDGs are most applicable to us. We reached out to our key stakeholder groups and discussed their views on this.



SDG 13 – Climate action

The world is facing major global challenges, including the consequences of climate change.

This affects TenneT's core business. And it is our choices and business conduct which can have a large impact on this the global challenge. That is why we have identified SDG 13 'Climate Action' as the main societal objective we contribute to. The impact of climate factors is also becoming increasingly important in our activities and business operations. This is why we strive to ensure a transition to a sustainable energy system at a socially acceptable cost while maintaining security of supply.



SDG 7 – Ensure access to affordable, reliable, sustainable and modern energy for all

SDG 7 is where we feel that we contribute most with our core business activities. The underlying target we contribute to is target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix. This is clearly reflected in TenneT's activities. Our investments are expected to connect 26.7 GW of offshore wind to the onshore grid by 2030. As of 2021, we were able to connect 8.5 GW of offshore wind energy so far. Onshore, we are facilitating the fast-growing supply of wind and solar energy with grid expansions and smart solutions. We have been able to achieve our target this year to progress on our investments. More information on this is included in the '[Ensure a critical infrastructure for society](#)' chapter. By realising our investments, we are able to contribute to the increase of renewables in the energy mix in the Netherlands and Germany and to drive the energy transition.



SDG 9 – Build a resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

Our core activities also make a significant contribution to SDG 9. Our role is particularly linked to target 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. By driving the energy transition and by operating as a European TSO, we support economic development and human well-being by empowering society and providing a secure supply of electricity today and in the future. We invest in our grid to ensure that our system is reliable, sustainable, resilient and future-proof for a changing energy mix. We can further ensure security of supply for the areas we serve by connecting our grid to other European countries. An example of this is the opening of the NordLink cable, the first direct power connection between Germany and Norway in 2021. The high-voltage DC link will enable the exchange of 1,400 MW of renewable energy – wind power from Germany and hydropower from Norway. NordLink is thus making a contribution to the energy transition in Germany and Europe. By increasing the number of interconnectors – from the current 16 – we create more opportunities to import and export electricity. This enables a more cost-efficient supply, making electricity more affordable for end-users. Furthermore, we also continue to investigate ways to make our grid more resilient, including protecting our assets against the effects of climate change. Extreme weather conditions such as floods and high winds, or the longer-term risk of rising sea levels, are factors we take into account. More information on this has been included in our [Key risks section](#).

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, relate to our circularity ambitions, which also has an effect on climate change. Reducing the use of virgin materials, such as copper, will have a positive climate effect as it avoids emissions in the extraction phase.

