



TenneT Holding B.V.

Green Financing Report 2021

In this year's report



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Key figures 2021



Advancement of proceeds

€
26.5
billion

Total Budget

€
14.8
billion

Total amount spent
as of 31 December 2021

€
1.5
EUR billion

Green project portfolio
CAPEX in 2021



Environmental impact indicators

8.2
million



Equivalent number of
households able to switch
to 100% renewable energy

9.5
million tonnes



Potential avoidance
of CO₂ emissions
per year



Operational and social indicators

283

Average
interruption time

over
125

Number of stakeholder
dialogues

2.0

Lost Time Injury
Frequency rate

100%

Percentage of suppliers
committed to Supplier
Code of Conduct



Planet indicators

891
GWh



Grid losses

0.06
%

SF₆ leakage rate

28

Environmental incidents

At a glance 2021



Windstrom-Booster

TenneT presented a new technological innovation that can significantly accelerate the expansion of the offshore wind grid in the North Sea. With the Windstrom-Booster, six gigawatts of offshore capacity can be realized three years earlier. In comparison, six gigawatts of capacity corresponds to six large power plants.

Start of construction landstation DolWin5

With a first pile ceremony, the construction of the onshore converter station commenced in Emden-East in April 2021.



New connection in Schleswig-Holstein

The new Westküstenleitung in Schleswig Holstein plays a central role in the Energiewende in Germany to secure both the regional supply and the transport of green electricity to the south. New parts of the new 140 Kilometer long connection went into operation. In 2023, the connection will be finished.

Green Eurobonds

TenneT issued EUR 2.8 billion of senior Green Bonds in 2021. Proceeds will be used to invest in eligible green projects focused on connecting large-scale offshore wind farms to the onshore electricity grid and enhancing the onshore transmission capacity for renewable energy.



2,100-tonne offshore jacket installed

The jacket for TenneT's Hollandse Kust (North) platform has been successfully installed off the coast of North Holland. The 2,100-tonnes construction was developed in Vlissingen.



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

In 2021, the landscape around us was subject to change. Key stakeholders, such as governments, have been working on defining new ambitions to accelerate the progress to combat climate change.

Whether this is related to the Fit for 55 package the European Commission has presented, new legislation that is related to achieving the EU Green Deal goals, the climate summit COP26 in Glasgow or new plans formulated by new governments in the areas we serve, all of them have a common denominator: we need to step up.

That is why we are proud to contribute to combatting climate change by our role in the heart of the energy transition and especially with the projects included in our Green Project Portfolio. Bringing more offshore wind via our grid connection systems to our onshore grid and realising onshore projects to enable the transmission of green electricity from more remote areas where renewable energy sources are located to where it is consumed.

With these and also our activities in general, we contribute to the EU Green Deal ambitions. Our contribution towards a greener and more sustainable Europe is also acknowledged and underlined by the outcome of our assessment related to the EU Taxonomy legislation.

As TenneT (and certainly by means of the projects included in the Green Project Portfolio) we meet the eligibility criterion with respect to the environmental and climate objective of climate mitigation as we are part of an interconnected system and aiming to transition to a climate neutral economy. More information on this is included in our Integrated Annual Report 2021.

Also the governments in Germany and the Netherlands have stepped up their climate ambitions in 2021 to take action. In Germany, it was announced that the new coalition aims to have 80% renewables in the energy mix (in stead of 65%) by 2030, implying significantly more solar and offshore wind energy capacity. In the Netherlands, the new coalition 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 underlines the opportunities and challenges TenneT has to drive the energy transition to help the governments in the areas we serve to achieve these goals. Our projects are making good progress and 2021 proved to be also a good year for us in terms of investments to make our grid future-proof. Also with respect to realising the Green Project Portfolio, we are making solid progress. The installation of the jacket of Hollandse Kust Noord and even the topside of Hollandse Kust Zuid (Alpha) underline our progress at sea and also on land we are progressing with the start of the substation in Emden-East for the DolWin5 project and the realisation of parts of the lines of our onshore projects such as for our Westküstenleitung project.

We also continue to look at ways to expand our Green Project Portfolio, which we managed to do so in 2021. 5 new projects were added bringing the total up to 24 projects, as offshore projects BorWin5 and DolWin5 and onshore projects Mittelachse, SuedLink and SuedOstLink were included.

We are pleased with the interest a broad range of investors have, which was visible when we issued our first triple senior tranche in May and our largest single senior green bond in November. The first transaction was split in three tranches of EUR 650 million (6.5 years, coupon 0.125%), EUR 500 million (term: 10 years, coupon 0.500%) and EUR 650 million (term: 20 years, coupon 1.125%). The second transaction was a single tranche of EUR 1 billion with a tenor of 13.6 years and a coupon of 0.875%. All these developments underline to us that moving towards a climate-neutral economy is getting more and more attention from i.e. policy makers and the investor community. In the heart of this, we will continue to work hard to deliver on our ambition to drive the energy transition.

TenneT Holding Executive Board

About TenneT

Profile

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, 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 power 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).

Our strategy, purpose and promises

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.

What we aim to achieve is defined in our purpose and promise. How we aim to achieve this is defined by our strategy, which helps us to fulfill our primary tasks and to create long-term value. Our TenneT principles help us to provide guidance in the way we as an organisation strive to do fulfill our role.

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 green finance projects



In 2021, we have added five more projects to our Green Project Portfolio that meet the criteria defined in our Green Financing Framework. These projects relate to the transmission of offshore generated electricity to the onshore grid, as well as projects related to the development, construction and reconstruction of the onshore electricity grid to enhance the transmission capacity that is required for renewable energy.

Altogether, this portfolio now consists of 19 projects. Five were added during 2021: the offshore projects BorWin5 and DolWin5 and the onshore projects Mittelachse, SuedLink and SuedOstLink. The proceeds of the Green Financing instruments 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 (DC) or alternating current (AC) technology.
- the development, construction and reconstruction of the onshore electricity grid to enhance the transmission capacity for renewable energy.

Our German offshore projects relate to AC connections from wind power plants transformed into DC on the converter platform. Converting to DC helps to reduce the amount of electricity lost in transporting electricity over long distances (grid losses). At the onshore converter station/ feed-in point, the electricity is then transformed back into AC to be fed into the grid. The majority of our projects included in our Green Project Portfolio are related to high voltage DC transmission cables connecting offshore wind power clusters in the German Bight with the German electricity grid.

For the Dutch offshore projects included in our Green Project Portfolio, the distances are shorter and where possible, we make use of AC connections to bring the wind generated electricity onshore. When completed, TenneT's investments backed by green financing will have the capacity to transport over 13 GW of green electricity from offshore wind farms to the Dutch and German grid and will have increased the transport capacity onshore with approximately 18 GW to enhance the transmission capacity that is required to transmit the increasing share of renewable energy. More information on our projects can be found in appendix 1 and on our website.

The onshore projects included in our Green Project Portfolio support our strategic ambition to drive the energy transition. In 2021, we have added three more onshore projects to our portfolio: Mittelachse, SuedLink and SuedOstLink. These projects are required to transport renewable energy generated in the northern part of Germany to other parts of Germany where the demand for electricity is high. These projects are important to realise ambitious climate targets, such as the European Commission's goal to reduce the EU's carbon footprint by 55% by 2030.



Our impact

As TenneT, we are aware that when we build, maintain and operate our grid, we have an impact on the environment. We use natural resources such as steel and copper to build our assets, which are constructed in the natural environment on land or at sea.

We strive to reduce our negative impacts as much as possible. We also aim to have positive environmental impacts where possible, for example by including measures that improve biodiversity in the design of our assets. Our most material positive environmental impact is connecting more and more renewable energy sources to our grid, thus avoiding carbon emissions from conventional fossil-based energy sources such as coal. Our annual report discloses more detailed information on our impacts and our Planet ambitions, such as our next steps with respect to promote circularity.

Overall, we aim for our actions to help achieve national and international climate and sustainability goals such as the Paris Climate Agreement (to which we are committed to contribute to via the Science Based Targets initiative) and the United Nations Sustainable Development Goals (SDGs). In our Integrated Annual Report 2021, we describe our commitments to these conventions and how our strategy, how we create value links to this.

The world is facing major global challenges, including climate change. This affects TenneT's core business. At the same time, this is the global challenge our choices and business conduct have the most impact on.



That is why we have identified SDG 13 as the main societal challenge we contribute to. How do we ensure a transition to a sustainable energy system at a socially acceptable cost while maintaining security of supply? The impact of climate factors is also becoming increasingly important in our activities and business operations. With our core business activities, we clearly contribute to SDG 7 and SDG 9 and in the execution of these activities, we realise we have an impact on other SDGs.



We contribute to SDG 7 as we aim to ensure access to affordable, reliable, sustainable and modern energy for all. 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, also with respect to the projects included in the Green Project Portfolio. In 2021, we have made good progress with respect to our investments. Examples of this related to the projects included in the Green Project Portfolio include

the milestones reached in the Hollandse Kust Zuid and Hollandse Kust Noord projects, where the jacket was installed at sea for Hollandse Kust Noord and the topside was even installed for Hollandse Kust Zuid (Alpha). At the end of 2021, we realised a cumulative total of 8.5 GW offshore capacity and connected renewable energy sources to our grid. And also onshore, we are facilitating the fast-growing supply of renewable energy by investing in our grid. With this, 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.



For SDG 9, our societal role is linked to target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all. By ensuring that we drive the energy transition and in operating as a European TSO, we support economic development and human well-being by empowering society, as our goal is to secure supply not only today but also tomorrow. To ensure that our grid is reliable, sustainable, resilient and of high quality, we invest in our grid. This enables us to connect more and more renewable energy sources to our grid and to make sure we are able to transport them from where green electricity is generated to where it is consumed. This is also reflected in our Green Project Portfolio as the projects selected contribute to this and help us to drive the energy transition and to secure supply of electricity now and in the future.

Furthermore, we are aware that in the execution of these activities, we also have an impact on other SDGs. This relates 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. That is why we aim to consider the areas near our assets at sea and on land when we are designing, building, maintaining and operating our assets and strive to make use of less virgin materials, such as copper, in our projects. With this, we want to contribute to a sustainable future for all.





Our performance

In this chapter we provide performance information regarding the projects that are included in our Green Project Portfolio. We have included our performance from a financial, environmental, social and operational perspective, with data per project for the reporting year 2021.

Green portfolio performance table	Total	Note
Eligible project category: Renewable energy		
Advancement of proceeds		
Total budget	26.5	A
Total amount spent as of 31 December 2021	14.8	A
Green project portfolio CAPEX in 2021	1.5	A
Environmental impact indicators		
Equivalent number of households able to switch to 100% renewable energy (in million)	8.2	B
Potential avoidance of CO ₂ emissions per year (million tonnes)	9.5	C
Operational and social indicators		
Average interruption time	283	D
Lost Time Injury Frequency rate	2.0	D
Percentage of suppliers committed to Supplier Code of Conduct	100%	D
Planet indicators		
Grid losses	891 GWh	E
SF ₆ leakage rate	0.06%	E
Oil leakages and environmental incidents	28	E

Results related to our projects

On an annual basis, we report on the performance of the projects included in our Green Project Portfolio. This is based on the selected key performance indicators as included in our Green Financing Framework. This includes information with respect to the use of proceeds, performance information regarding the supply of electricity, safety and environmental information such as impact indicators (i.e. the potential avoidance of carbon emissions). Results are included in the table below and additional disclosures have been provided in the ‘Notes to the Green Project Portfolio performance table’.

Developments related to the Green Project Portfolio in 2021

Our projects are progressing well. This year we have reached new milestones in our projects, also related to those included in our Green Project Portfolio. An example of this is related to the delivery of a new connection in Schleswig-Holstein as part of our Westkustenleitung project. Also in our offshore projects we have reached new milestones as for both Hollandse Kust Noord and

Hollandse Kust Zuid. For Hollandse Kust Noord, the jacket was placed at sea and for Hollandse Kust Zuid (Alpha) the topside was installed in December 2021.

Furthermore, we are also aiming on embedding sustainable practices to a greater extent in the realisation of the projects, also those included in our offshore portfolio. An example of this is the Hollandse Kust Noord and Hollandse Kust West Alpha and Beta projects. These are the first 700 MW AC offshore platforms to incorporate ‘green’ measures in tender, design and construction phase. Examples of this include measures related to nature-inclusive design such as a fish hotel which was included in the design of the jacket and to increase the reduction of carbon emissions in the realisation of these projects.

Of course, in 2021 we also faced some challenges regarding the projects included in our Green Project Portfolio, such as our offshore projects. Closures and lockdowns in some of the overseas ship yards where we construct our offshore platforms put the timescale of several projects under pressure, such as for our DolWin5 project.



Construction of the platform at the Singapore shipyard is currently behind schedule due to restrictions related to the COVID-19 pandemic, including labor and travel restrictions to Singapore. Against this background, in December 2021, TenneT asked the BNetzA for approval to postpone the expected completion date of the grid connection system from October 1, 2024 to October 1, 2025.

Also our SylWin1 and HelWin2 projects faced some interruptions, which has caused us to not meet our internal target of 95.1% offshore grid availability by 1%.

Furthermore, the European Commission adopted a series of legislative packages in 2021 with the goal to achieve the European Green Deal objectives. The EU Taxonomy is an example of this, with the aim to establish an European classification system to provide business and investors insights in the degree to which extent the activities of organisations within the EU contribute to the EU Green Deal objectives and subsequently also aims to prevent 'greenwashing' of companies and their activities. In 2021, TenneT has performed its initial assessments regarding the EU Taxonomy legislation that has been published.

Based on this analysis, we have concluded that our activities substantially contribute to the objectives related to the EU Green Deal. Our assessments indicate that 97% of our overall turnover, 100% of our CAPEX and 99% of

our OPEX meet the eligibility criteria of the EU Taxonomy. This also includes projects included in the Green Project Portfolio. More information on the outcome of the EU Taxonomy assessment has been included in our Integrated Annual Report 2021.

Outlook

We continue to look for new ways to finance projects by means of green financing. In line with the update done in our Green Financing Framework, we are aiming to include additional projects in the Green Project Portfolio. These onshore and offshore projects benefit society to help make the transition to a climate-neutral economy. Furthermore, our Green Financing Framework has been set-up with the aim to continuously respond to changes in the industry and best market practices and expectations; as such the intention will also be to consider further alignment of the framework with the EU Taxonomy / EU Green Bond Standards. We are keeping an eye out for developments which potentially could impact the disclosures in our Green Finance reporting.

We will also continue to actively contribute to support the further growth of the Green and Sustainable financing market via market consultations (e.g. EU Taxonomy), our membership of the Corporate Forum on Sustainable Finance or by supporting new initiatives and products.

Notes to the Green Project Portfolio performance table

A. Advancement of proceeds and projects

Eligible green project portfolio	EUR	Allocation of green funding	EUR
Net funding requirement	13.9	Outstanding Green bonds/debt	12.8
Total eligible green project portfolio	13.9	Total outstanding green bonds/debt	12.8

As of 31 December 2021, the total amount budgeted by TenneT with respect to the 24 projects in the Green Project Portfolio amounted to approximately EUR 26.5 billion. The total amount spent amounted to EUR 14.8 billion, of which EUR 0.9 billion was financed by third parties (in the form of both debt and equity). As a result, the net funding requirement was around EUR 13.9 billion, of which approximately EUR 12.8 billion was financed through Green Financing Instruments. The allocation of proceeds to the projects included in the project portfolio is 100%. The annual capex spend of the total portfolio is EUR 1.5 billion.

B. Impact on households

We want to bring more and more renewable energy to electricity consumers. That is why we connect wind farms at sea and on land to our grid, and install the cables and lines needed to transport the electricity. Although most of the electricity is used by industry in Germany, we have decided to report the equivalent impact on households. The number of households which could theoretically benefit from electricity actually transported in 2021 is around 8.2 million, which is about 17% of all the households in the areas we serve in the Netherlands and Germany.



This calculation is based on the most recent data available of the average electricity consumption of a Dutch / German household, which for the Netherlands is from 2020 and for German households this relates to the year 2019. The total number of households both relate to 2019 data, as this is the most recent data available.

C. Avoided emissions

As aforementioned, one of our largest impacts is related to avoiding emissions that would otherwise have been emitted if these would have still been generated from fossil-based energy sources. Our projects help to avoid carbon emissions. The potential avoidance of CO₂ emissions in 2021 amounted to 9.5 million tonnes. To calculate the amount of CO₂ avoided by any Green Financing Instrument in 2021, please consult appendix 2 which includes an explanation of the calculations.

D. Operational and social performance information

Societal performance information

Currently most of our onshore projects included in the scope of the Green Project Portfolio are not operational yet, except for our Mittelachse project. Therefore the majority of the performance information included in this figure relates to our offshore projects, with exception of the safety performance. In realising our projects, we want to act as a responsible grid operator. That is why we engage with our stakeholders, such as local communities and governments and aim to work together with our suppliers to ensure that we also make progress. Not only within our own organisation, but also in our supply chain.

Engaging with local communities and governments, with measures taken for many months within 2021 due to the COVID-19 pandemic, has proven to be a challenge. Our events and dialogue formats used to be predominantly in person, which is obviously not possible for many months in 2021. In these occasions, we have continued with the new ways we have found in previous year and were able to conduct more than 125 stakeholder dialogues in 2021 related to projects in the Green Portfolio. Examples include online meetings and when possible also offline events where we aimed to work together with stakeholders and inform and discuss with them the progress of certain projects for instance. Also tendering our projects continued to be more difficult due to the circumstances in 2021, but we continued to leverage on the lessons learned from 2020 and held stakeholder events also digitally for certain projects. Also here we were able to find ways to continue and drive the energy transition. Furthermore, we also continued to request our suppliers to meet the standards we have set with respect to responsible conduct in realising our projects.

In 2021, 100% of our suppliers have committed themselves to our supplier code of conduct with respect to the projects included in our Green Project Portfolio.

For the projects that are operational, we were able to transmit green electricity from renewable energy sources such as offshore and onshore wind parks to our grid. This relates to 14 projects, which transmitted a total of 24,809 GWh of electricity in 2021. Thanks to the HVDC technology we use in our German projects, grid losses are relatively low.

Safety

We strive to build, maintain and operate our projects in the most safe and secure way. Our goal is to have 'Zero harm' as we believe that every incident is one too many. We acknowledge that this is not an easy task and strive to improve our safety performance every day. In 2021, the projects experienced more Lost Workday Cases (LWCs) compared to 2020 as we reported 17 LWCs, which has resulted in a safety performance of 2.0, which is higher than the LTIF reported in 2020 (0.92). This is partially due to more projects included in the Green Project Portfolio, however also without this effect we also recorded a higher combined LTIF for these projects. We are working on further strengthening our safety environment within TenneT and also at our contractors. This will help us in our aim to have a better safety performance next year compared to this year for the projects included in the Green Project Portfolio.

E. Environmental performance information

Although we have a significant environmental impact, we also realise that in building and operating our assets, we have a negative impact on the environment. This relates to waste (of which we currently estimate that approximately 10-25% is non recyclable), environmental incidents (28 in 2021, of which 21 relate to oil leakages) and carbon emissions while operating our assets related from either grid losses (326,106 tonnes CO₂ equivalents), energy consumption (61,521 tonnes CO₂ equivalents) and SF₆ leakages (1,208 tonnes of CO₂ equivalents).

In the past year, we were able to make progress related to the positive nature measures that we incorporated in realising our projects. An example of this is a multi service monitoring antenna installed at our Borssele Alpha grid connection system. This relates to ecological sensors where we tested bird / bat sensors which help to protect them. Next to this, the coastal birds breeding areas at our Hollandse Kust Zuid landstation is an example of how we were able to also create positive impacts for the nature near our assets.



Appendices

Appendix 1: Additional project information

	DolWin1	DolWin2	DolWin3	BorWin3	SylWin1
Start of connection	DolWin alpha	DolWin beta	DolWin gamma	BorWin gamma	SylWin alpha
End of connection	Dörpen West, Germany	Dörpen West, Germany	Dörpen West, Germany	Emden Ost, Germany	Büttel, Germany
Transmission power	800 MW	916 MW	900 MW	900 MW	864 MW
Cable length Total (submarine; onshore)	165 km (75 km; 90 km)	135 km (45 km; 90 km)	160 km (80 km; 80 km)	160 km (130 km; 30 km)	205 km (160 km; 45 km)
Start of construction	2011	2012	2014	2015	2012
Start of operation	2015	2016	2018	2019	2015
Added to green project portfolio in	May 2015	May 2015	May 2015	May 2016	September 2016

	BorWin2	BorWin1*	HelWin1	HelWin2	Borssele Alpha
Start of connection	BorWin beta	BorWin alpha	HelWin alpha	HelWin beta	Borssele alpha
End of connection	Diele, Germany	Diele, Germany	Büttel, Germany	Büttel, Germany	Borssele, Netherlands
Transmission power	800 MW	400 MW	576 MW	690 MW	700 MW
Cable length Total (submarine; onshore)	200 km (125 km; 75 km)	200 km (125 km; 75 km)	130 km (85 km; 45 km)	130 km (85 km; 45 km)	60 km (59 km; 1 km)
Start of construction	2010	2008	2011	2011	2017
Start of operation	2015	2010	2015	2015	2019
Added to green project portfolio in	March 2017	June 2017	June 2017	March 2018	March 2018

* The construction of BorWin1 started before TenneT acquired the project as part of Transpower assets, formerly part of E.ON (currently TenneT Germany).



	Borssele Beta	DolWin6	HKZ Alpha	HKZ Beta	Alfa Ventus
Start of connection	Borssele beta	DolWin kappa	HKZ Alpha	HKZ Beta	AlfaVentus platform
End of connection	Borssele, Netherlands	Emden/Ost	Maasvlakte2	Maasvlakte2	Hagermarsch, Germany
Transmission power	700 MW	900 MW	700 MW	700 MW	62 MW
Cable length Total (submarine; onshore)	66 km (65 km; 1 km)	86 km (45 km; 41 km)	45 km (42 km; 3 km)	37 km (34 km; 3 km)	66 km (60 km; 6 km)
Start of construction	2017	2019	2019	2020	2006
Start of operation	2020	2023	2021	2022	2009
Added to green project portfolio in	March 2018	March 2019	March 2019	March 2019	April 2020

	HKN	Nordergrunde	Dörpen/West - Niederrhein	Westküstenleitung	DolWin5
Start of connection	HKN platform	Nordergrunde platform	Dörpen West substation	Brunsbüttel substation	DolWin epsilon
End of connection	Beverwijk, Netherlands	Inhausen, Germany	Stadt Meppen, Germany	Danish border, Germanys	Emden Ost, Germany
Transmission power	700 MW	111 MW	3100 MW	3500 MW	900 MW
Cable length Total (submarine; onshore)	45 km (35 km; 10 km)	32 km (28 km; 4 km)	31 km (onshore only)	138 km (onshore only)	130 km (100 km; 30 km)
Start of construction	2020	2013	2017	2015	2021 Cable, 2024 platform
Start of operation	2023	2017	2022	2023	2024
Added to green project portfolio in	April 2020	April 2020	April 2020	April 2020	March 2021

	BorWin5	Mittelachse	SuedLink	SuedOstLink
Start of connection	BorWin epsilon	Audorf, Germany	Part 1 Brunsbüttel, Germany Part 2 Wilster, Germany	Part 1 Wolmirschmidt in Sachsen-Anhalt, Germany Part 2 Klein Rogahn, in Mecklenburg-Vorpommern, Germany
End of connection	Garrel-Ost, Germany	Kassö, Denmark	Part 1, Großartach in Baden-Württemberg, German Part 2, Bergheimfeld-West in Bavaria, Germany	Landshut in Bavaria, Germany
Transmission power	900 MW	3000 MW	4000 MW (2x2000 MW)	4000 MW (2x2000 MW)
Cable length Total (submarine; onshore)	230 km (110 km; 120 km)	150 km (onshore only)	700 km (onshore only) TenneT part is 245 km (includint Elbe tunnel)	700 km (onshore only) from frontier Thüringen/Bavaria to ISAR bei Landshut
Start of construction	2022	2015	2022	2022
Start of operation	2025	2020	2026	2030
Added to green project portfolio in	March 2021	March 2021	March 2021	March 2021



Appendix 2: Potential avoided CO₂ emissions per bond issue

Avoided CO₂ emissions are key to reaching the ambitious targets of the Paris Agreement and the goals of the EU Green Deal. Transporting renewable energy from sea to land clearly contributes to achieving the Paris targets. We highlight avoided CO₂ emissions based on the average grid mix of the Netherlands and of Germany, linked to our investors' investment. Although our approach is a theoretical one, we believe this indicates the order of magnitude of our Green Project Portfolio.

The calculation is performed in the following way:

- The amount of transported electricity is converted to avoided carbon emissions by the average carbon intensity of the German grid (366 g/KWh) or Dutch grid (454 g/KWh) of 2021 for each project.
- For each issue, we calculate which part of the total size of the issue belongs to which project.

- The allocation to each project is divided by the total budget for each project and that is multiplied by the avoided carbon emissions of the specific project.
- For each issue, the projects that were part of the Green Project Portfolio at that time are taken into account. Adding up the avoided carbon emissions of each project gives the total avoided CO₂ emissions per issue. The avoided CO₂ emissions per bond issue were calculated for 2021. Depending on the size of the investment, the CO₂ emissions per investment can be calculated by:

Avoided CO₂ emissions related to investment x

$$= \frac{\text{investment size (million)}}{\text{size issue y}} \times \text{avoided CO}_2 \text{ emissions issue y}$$

Date of issue	Type of financing	Size (in million EUR)	Avoided CO ₂ emissions (tonnes x 1000) in 2021
June 2015	Green Bond	500	358,285
May 2016	Green Schultschein	77	55,176
May 2016	Green Schultschein	100	71,657
May 2016	Green Schultschein	55	39,411
May 2016	Green Schultschein	50	35,828
May 2016	Green Schultschein	138	98,887
May 2016	Green Schultschein	80	57,326
June 2016	Green Schultschein	500	353,148
June 2016	Green Bond	500	353,148
October 2016	Green Bond	500	396,939
April 2017 / August 2018	Green Hybrid	1,100	942,994
June 2017	Green Bond	500	448,784
June 2017	Green Bond	500	446,882
June 2018	Green Bond	750	884,766
June 2018	Green Bond	500	589,844
January 2019	Green US Private Placement	500	589,844
May 2019	Green Bond	1250	1,105,992
July 2020	Green Hybrid	1,000	718,607
November 2020	Green Bond	750	517,791
November 2020	Green Bond	600	237,232
May 2021	Green Bond	650	110,699
May 2021	Green Bond	500	69,523
May 2021	Green Bond	650	83,394
November 2021	Green Bond	1000	93,099
Total		12,750	8,659,256

Assurance report of the independent auditor with respect to the 2021 Sustainability Information of TenneT Holding B.V.

To the shareholder and Supervisory Board of TenneT Holding B.V.

Our conclusion

We have reviewed the Sustainability Information in the 2021 Green Financing Report of TenneT Holding B.V. ("TenneT") based in Arnhem (the "Sustainability Information"). A review is aimed at obtaining a limited level of assurance.

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Sustainability Information of TenneT does not present, in all material respects, a reliable and adequate view of:

- the policy and business operations with regard to corporate social responsibility, as included in the "Reporting principles" within the "About this report" section of the 2021 Green Financing Report; and
- the thereto related events and achievements for the year 2021 as included in the section 'Our performance' as disclosed in the 2021 Green Financing Report, in accordance with the reporting criteria as included in the section 'Reporting Principles'.

The Sustainability Information comprises a description of the sustainable performance (if operational) information of the DolWin1, DolWin2, Dolwin3, BorWin1, BorWin2, BorWin3, SylWin1, HelWin1, HelWin2, Borssele Alpha, Borssele Beta, DolWin6, Hollandse Kust Zuid Alpha and Beta, Hollandse Kust Noord, Alfa Ventus, Nordergründe, Dörpen/West – Niederrhein, Westküstenleitung, BorWin5, DolWin5, SuedLink, SuedOstLink and Mittelachse projects for the year ended 31 December 2021, as consolidated in 'Our performance' reported in the Green Financing Report 2021.

Basis for our conclusion

We have conducted our review in accordance with Dutch law, including Dutch Standard 3000A 'Assurance engagements other than audits or reviews of historical financial information (attestation engagements)'. This engagement is aimed to obtain limited assurance.

Our responsibilities in this regard 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). Furthermore we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Reporting criteria

The Sustainability Information needs to be read and understood together with the reporting criteria. TenneT is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting.

The reporting criteria used for the preparation of the Sustainability Information are disclosed in the chapter 'Reporting Principles' of the 2021 Green Financing Report.

The absence of an established practice on which to draw, to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Limitations to the scope of our review

The Sustainability Information includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the Sustainability Information.

The references to external sources or websites in the Sustainability Information are not part of the Sustainability Information as reviewed by us. We therefore do not provide assurance on this information.



Responsibilities of the management board for the Sustainability Information

The Executive board of the TenneT is responsible for the preparation of the Sustainability Information in accordance with the applicable criteria. The choices made by the Executive Board regarding the scope of the Sustainability Information and the reporting policy are summarized in the chapter 'About this report' of the 2021 Green Financing Report.

The Executive board is also responsible for such internal control as it determines is necessary to enable the preparation, measurement or evaluation of the Sustainability Information that is free from material misstatement, whether due to fraud or errors.

The Supervisory Board is responsible for overseeing TenneT's reporting process.

Our responsibilities for the review of the Sustainability Information

Our responsibility is to plan and perform our review in a manner that allows us to obtain sufficient and appropriate evidence for our conclusion.

The procedures performed in this context differ in nature and timing and are less extent as compared to reasonable assurance engagements. The level of assurance obtained in a limited assurance engagement is therefore substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users taken on the basis of the Sustainability Information. The materiality affects the nature, timing and extent of our review procedures and the evaluation of the effect of identified misstatements on our conclusion.

We apply the 'Nadere voorschriften kwaliteitssystemen' (NVKS, Regulations for quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have exercised professional judgement and have maintained professional scepticism throughout the review, in accordance with the Dutch Standard 3000A, ethical requirements and independence requirements.

Our review included amongst others:

- Performing an analysis and obtaining insight into relevant environmental and social themes and issues, and the characteristics of TenneT.
- Evaluating the appropriateness of the reporting policy and its consistent application, including the evaluation of the results of the stakeholders' dialogue and the reasonableness of management's estimates.
- Evaluating the design of the reporting systems and processes related to the Sustainability Information.
- Reviewing internal and external documentation to determine whether the information as included in the KPIs, including the presentation and assertions made in the Sustainability Information, is adequately supported.
- Interviewing relevant staff responsible for providing the information in the Sustainability Information, carrying out internal control procedures on the data and consolidating the data in the Sustainability Information.
- An analytical review of the data and trends submitted for consolidation at corporate level.

We communicated with the Executive and Supervisory Boards regarding, among other matters, the planned scope, timing and outcome of the review and significant findings that we identified during our review.

Rotterdam, 14 March 2022

Deloitte Accountants B.V.

J.A. de Bruin



About this report

This Green Finance Report tracks the progress of our projects funded by Green Financing Instruments, mainly our green bonds, including our green schuldschein, green USPP and green hybrids. The proceeds from our green financing initiatives are being used for investments in grid connections used for the transmission of renewable electricity from offshore wind farms to the onshore electricity grid and onshore projects that help increase the transmission capacity required for the energy transition.

The proceeds of our green debt issues are specifically dedicated to a portfolio currently consisting of 24 projects: Alfa Ventus, Borssele Alpha, Borssele Beta, BorWin1, BorWin2, BorWin3, DolWin1, DolWin2, DolWin3, DolWin6, Dorpen/West – Niederrhein, HelWin1, HelWin2, HKN, HKZ Alpha, HKZ Beta, Mittelachse, Nordergrunde SylWin1, DolWin5, BorWin5, SuedLink, SuedOstLink and Westenkustenleitung. The latter five projects were included in 2021.

We have disclosed qualitative information and quantitative data of these projects related to the reporting year starting on 1 January 2021 and ending on 31 December 2021. This 2021 Green Finance Report was published on 15 March 2022 and the 2020 Green Finance Report was published on 11 March 2021.

We have designed a Green Financing Framework, based on the Green Bond Principles as issued by the ICMA, to ensure our green bond-funded projects meet the proper criteria.

We have asked ISS-oekom, a leading rating agency in the field of sustainability, to perform a second party opinion to assess our framework. In this assessment, ISS-oekom verifies whether we meet the Green Bond Principles for our green bond-funded portfolio and its sustainability quality and performance. Reporting on the use of our proceeds and performance information of our projects is a part of the Green Bond Principles and therefore we publish our Green Finance Report on an annual basis. ISS-oekom issued positive independent opinions on the sustainable quality of the projects related to our green debt.

Reporting principles

The definitions and principles used with respect to this report are disclosed in the 'Reporting guidance document 2021' related to our Integrated Annual Report 2021 and Green Finance Report 2021, which is based on our Green Financing Framework. Both documents are made available on www.tennet.eu/company/our-responsibility/download-reports/



Colophon

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We look forward to receiving your feedback on this report;
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