

Green Funding

for Sustainable Growth

Green bond report 2015





Green bond report 2015

In May 2015, TenneT became the first non-financial company in the Netherlands to issue euro-denominated green bonds, opening up an exciting new form of corporate funding supporting a sustainable future. This is the first of our annual reports on our green bonds programme and we will keep you informed of our progress each year, going forward.

Issuing green bonds is a logical next step for us in fulfilling our role of connecting society to a reliable supply of electricity. Renewable energy is the future and this is increasingly recognised by politicians and society at large - as was underlined once again during the 2015 Paris climate conference. As grid operator, we are fully and continuously aware that we must execute our EUR 20 billion investment programme in the Netherlands and Germany over the next 10 years in order to be able to reliably provide our customers with the energy they need - now and in the future.

Our green bond

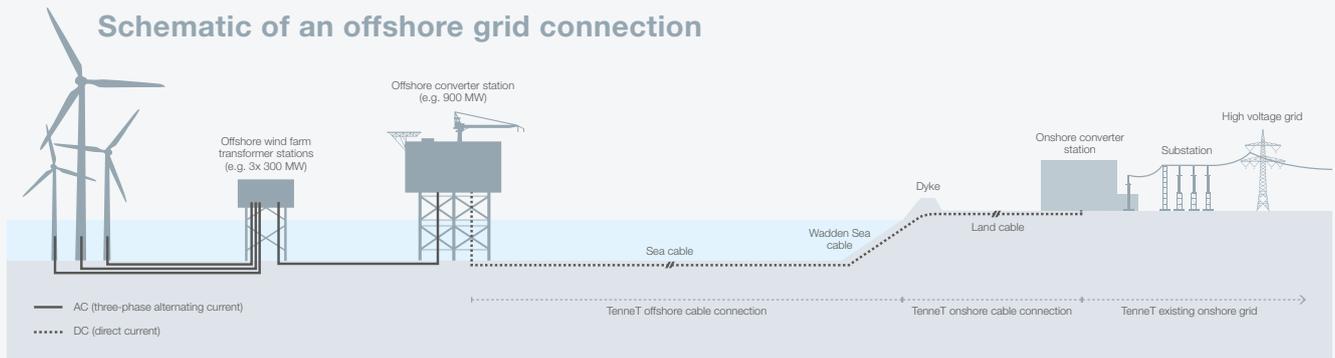
TenneT's first green bond issue raised EUR 1 billion in two tranches of EUR 500 million with maturities of six and twelve years. Green bonds allow investors to support activities that benefit society.

The proceeds of our first green bond issue are dedicated to three projects connecting wind farms in the North Sea to the German grid, DoWin1, 2 and 3. The DoWin portfolio transports entirely renewable energy from windfarms to the German grid and meets the Green Bond Principles. This annual green bond

report describes the sustainable performance of the DoWin projects linked to this green bond issue. The report was reviewed by EY and the assurance report can be referenced on page 7.

Sustainability is a guiding principle in our daily work at TenneT and as the energy transition gathers pace in Germany and the Netherlands, we are continuously looking for ways to improve our sustainability performance. Our aim is to be among the most sustainable TSOs in North West Europe.

For a company operating a 21,000 kilometre high-voltage grid across the Netherlands and a large part of Germany, green bonds are the perfect way to finance the integration of renewable energy sources into the German and Dutch electricity grids. While both countries execute this transition in their own ways, TenneT is there to ensure that the renewable electricity which is generated can be used by households in the Netherlands and Germany.



Our projects, DolWin1, DolWin2 and DolWin3

The DolWin projects are part of an ambitious programme to provide grid connections to offshore wind parks off the coast of Germany, in the German Bight, as part of the German Energiewende. It forms part of the DolWin cluster, named after the bay of Dollard on the German-Dutch border.

DolWin1, the first of the projects, which started operations in 2015, allows for the transport of 800 MW of offshore wind power from the Trianel Borkum-West II wind park to Germany's onshore power grid. Currently, Borkum Riffgrund 1 (312MW) and Borkum West 2 Trianel (200 MW) are connected. The project was built by ABB and was handed over to TenneT at the end of June 2015. In that year, it provided almost 300,000 German households with electricity and saved 0.7 tonnes of CO₂.

DolWin1 is a high-voltage direct current (HVDC) link. The project differs from onshore HVDC systems in that one of the two converter stations is built on a platform in the sea. It uses voltage-sourced converters and the total cable length is 165 km. Of this, 75 kilometres is sub-sea and 90 kilometres is onshore underground. HVDC was chosen for most of these grid connections, because of the relatively long distance involved, which makes conventional alternating current transmission uneconomical. Therefore, alternating current from wind power plants is transformed into direct current on the offshore converter platform DolWin Alpha. Direct current is transformed back into alternating current to be fed into the meshed European power grid at the onshore converter station in Dörpen West in Germany. DolWin2 and 3 are similar projects to DolWin1 and will start operations in 2016 and 2017, respectively.

DolWin2 is a HVDC connection that can transport 916 MW of offshore wind power to the German grid.

DolWin3 can transport 900 MW of offshore wind power.

Together, the three DolWin projects can transmit the energy used annually by 2.9 million German households. The DolWin projects and the connected wind farms combined are expected to be carbon-neutral within two years of becoming operational. The EUR 1.0 billion raised through the inaugural green bonds was allocated to these projects.

More information on our offshore projects can be found on our website www.tennet.eu

Our performance

The quality of the DolWin projects in terms of sustainability was verified by oekom through a Green Bond Framework. Oekom, a leading rating agency in the field of sustainability, assessed TenneT's Green Bond Framework describing the environmental and social indicators, as well as the impact indicators related to the projects linked to the green bond issue. Annual reporting on the performance of these indicators is at the heart of our green bond issue, keeping our investors and our other stakeholders well-informed and allowing them to weigh the performance of the underlying projects. Indicators relevant to our yearly reporting are mentioned in the Green Bond Framework and the results over 2015 for each of these indicators can be found in the tables on the next pages.

There are no significant controversies reported, since there were no significant spills, major safety incidents or any other incident in 2015, that had significant impact on the execution of the projects, environment or people.



Advancement of proceeds and projects

Per 31 December 2015, the total amount spent by TenneT on the three DoWin projects came to approximately EUR 2.48 billion, about EUR 0.69 billion of which was already financed by third parties (through debt and equity). Therefore, the net funding requirement is about EUR 1.80 billion, of which EUR 1.0 billion was financed through the 2015 inaugural green bond programme. As a result, the green bond is already fully in use as financing for the three DoWin projects. An overview of this calculation:

Total budget DoWin 1, 2 and 3	€ 3.80bn
Total spent on DoWin 1, 2 and 3	€ 2.48bn
Third party financing (debt and equity)	€ 0.69bn -/-
Net funding requirement green bonds	€ 1.80bn
Funded by green bonds in 2015	€ 1.00bn -/-

(figures as per 31 December 2015)

DoWin1 became operational on June 27 2015.
DoWin2 and DoWin3 will start operations in 2016 and 2017, respectively.

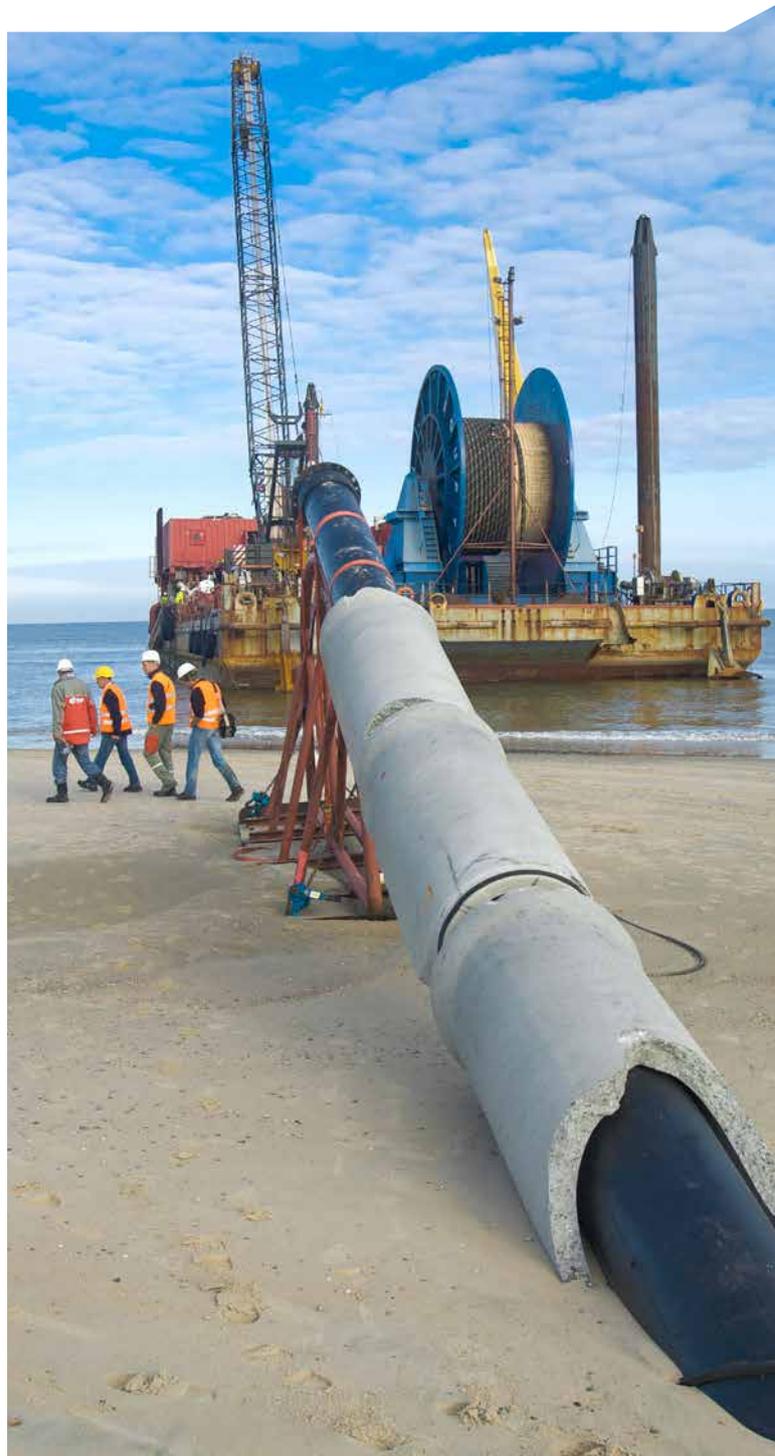
Project	Platform in operation
DoWin1	2015
DoWin2	2016
DoWin3	2017

Transport and availability

In the six months since becoming operational in 2015, DoWin1 transmitted 926 GWh of electricity. Due to HVDC technology, grid losses are comparatively low though they do of course occur. The related grid losses and the availability of DoWin1 are provided below. Almost half the down time was due to scheduled maintenance.

	DoWin1	DoWin2	DoWin3	Total
Transported electricity (GWh)	926	-	-	926
Grid losses (GWh)	31	-	-	31
Grid losses (%)	3.35%	-	-	3.35%

	DoWin1	DoWin2	DoWin3	Total
Average interruption (minutes)	12,332	-	-	12,332
Grid availability (%)	95%	-	-	95%





Impact on households

The ultimate objective of installing wind farms at sea and the cables and lines needed to transport the electricity, is to bring renewable energy to electricity consumers in Germany. Although most of the electricity is used by businesses in Germany, we have elected to report the impact on households.

The number of households which could theoretically benefit from the electricity actually transported in 2015 is around 300,000. Since only DoIWin1 provided electricity to our onshore grid in 2015 and was in fact only operational from the end of June, the impact is still relatively small. This is expected to grow in the coming years.

	DoIWin1	DoIWin2	DoIWin3	Total
Number of households provided with access to wind power (based on actual operational capacity)	271,316	-	-	271,316

Avoided CO₂ emissions

Electricity produced by wind parks rather than by fossil based power plants has a significantly lower CO₂ impact. The DoIWin projects contribute to avoiding these carbon emissions. Over 2015 their impact is still relatively small, but it is expected to increase in the coming years.

The impact on households and the amount of CO₂ emissions avoided due to the installed capacity of DoIWin1, DoIWin2 and DoIWin3 are provided in the **green bond framework**

	DoIWin1	DoIWin2	DoIWin3	Total
Potential avoidance of CO ₂ emissions (based on actual operational capacity, in millions of tonnes)	0.7	-	-	0.7



Safety

Ensuring the safety of everyone involved in our activities – our employees and contractors – is a top priority and a core value of the company. Our ambitious Safety Vision 2018, introduced in 2014, is a reflection of this. Safety is not just crucial to employees working in the field, but also to our office

staff. Nevertheless, safety incidents do happen and we investigate high-risk incidents to make sure any lessons learned are embedded in our processes. In 2015, the safety incidents related to our DoIWin projects all took place during the construction of DoIWin3.

	DoIWin1	DoIWin2	DoIWin3	Total
Lost workdays (LWC)	0.0	0.0	4.0	4.0
LTIF (LWC/million hours worked)	0.0	0.0	5.7	2.8
Fatalities (#)	0.0	0.0	0.0	0.0

Environment

Sulphur hexafluoride (SF₆) is used in high-voltage equipment, because it is an excellent electrical insulator. SF₆ is, however, a strong contributor to greenhouse gas emissions. In 2014, TenneT developed an SF₆ policy, striving to minimise usage and emission of SF₆.

Leakage rates are expressed as the kilograms of SF₆ leaked divided by the amount of SF₆ present in our assets. A leakage rate of 0.06% for DoIWin1 is below the industry standard for new equipment.

	DoIWin1	DoIWin2	DoIWin3	Total
Kg SF ₆ leaked/Kg SF ₆ banked	0.06%	-	-	0.06%



Assurance report of the independent auditor

To: the general meeting of shareholders and the Supervisory Board of TenneT Holding B.V.

We have reviewed the Green bond report 2015 (hereinafter: the Report) of TenneT Holding B.V., Arnhem (hereinafter: TenneT). The Report comprises a description of the sustainable performance of the DolWin1, DolWin2 and DolWin3 projects during the reporting year 2015.

Limitations in our scope

The green bond reporting principles, as published in “Definitions integrated annual report and green bond report 2015” on TenneT’s website (link), are integral part of the Report and therefore of our assurance engagement. Other references (to www.tennet.eu, external websites and other documents) are outside the scope of our assurance engagement.

Board of management’s responsibility

The board of management is responsible for the preparation of the Report in accordance with the green bond reporting principles as developed by TenneT as disclosed in “Definitions integrated annual report and green bond report 2015” on www.tennet.eu

The board of management is also responsible for such internal control as it determines is necessary to enable the preparation of the Report that is free from material misstatement, whether due to fraud or error.

Auditor’s responsibility

Our responsibility is to express a conclusion on the report based on our review. We conducted our review in accordance with Dutch law, including the Dutch Standard 3000 Assurance engagements other than audits or reviews of historical financial information. This requires that we comply with ethical requirements and that we plan and perform the review to obtain limited assurance about whether the Report is free from material misstatement.

A review is focused on obtaining limited assurance. The procedures performed in obtaining limited assurance are aimed on the plausibility of information which does not require exhaustive gathering of evidence as in engagements focused on reasonable assurance. The performed procedures consisted primarily of making inquiries of management and other

within the entity, as appropriate, applying analytical procedures and evaluating the evidence obtained. Consequently a review engagement provides less assurance than an audit.

Procedures performed

Our main procedures included the following:

- Evaluating the acceptability of the reporting principles and their consistent application and the reasonableness of accounting estimates made by management.
- Evaluating the design and implementation of the systems and processes for data gathering and processing of information as presented in the Report.
- Interviews with relevant staff responsible for providing the information in the report, carrying out internal control procedures on the data and the consolidation of the data in the report.
- Evaluating internal and external documentation, in addition to interviews, to determine whether the information in the report is reliable.

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

Conclusion

Based on our procedures performed, and with due consideration of the limitations described in the paragraph “Limitations in our scope”, nothing has come to our attention that causes us to conclude that the information in the Report, in all material respects, does not provide a reliable and appropriate presentation of the sustainable performance of the DolWin1, DolWin2 and DolWin3 projects during the reporting year 2015, in accordance with the green bond reporting principles as developed by TenneT as disclosed in “Definitions integrated annual report and green bond report 2015” on www.tennet.eu

Rotterdam, 3 March 2016

Ernst & Young Accountants LLP
Signed by R.T.H. Wortelboer



Colophon

TenneT Holding B.V.

Utrechtseweg 310, NL-6812 AR, Arnhem

P.O. Box 718, 6800 AS Arnhem

The Netherlands

Telephone +31 (0)26 37 32 600

www.tennet.eu

We look forward to receiving your feedback on this report, please send an email to Jeroen.dicker@tennet.eu

Disclaimer

‘We’, ‘TenneT’, ‘TenneT Holding’, ‘the Group’, ‘the company’ or similar expressions are used in this report as synonyms for TenneT Holding B.V. and its subsidiaries.

All financial information in this integrated annual report is reported in millions of euros, unless stated otherwise.

As a result, small rounding differences may occur.

Definitions of the KPIs reported are published on our website **[www.tennet.eu/CSR & sustainability](http://www.tennet.eu/CSR&Sustainability)**