

TenneT Holding B.V.

# Additional CSR data

CSR data linked to  
Integrated Annual Report 2021

## Introduction

In this additional CSR data document, we provide more details on the CSR performance of TenneT in 2021. Together with over 6,620 employees, working in one of our 8 offices in Germany, the Netherlands or at other locations, we aim to secure supply of energy for society and strive to make responsible choices in doing so. In our Integrated Annual Report 2021 (IAR2021), we report about the topics that are considered to be most relevant to our internal and external stakeholders taking the TenneT Holding perspective, prepared in accordance with sustainability guidelines defined by the Global Reporting Initiative Standards. The materiality process is fundamental to integrated reporting as it ensures we meet the level of transparency our stakeholders have the right to expect. More information about this is disclosed later in this document.

Our CSR policy and activities are not limited to topics resulting from the materiality analysis. Therefore additional CSR data is reported in this document, to provide additional information of the progress on TenneT's ambitions on how we aim to create sustainable value.

In our integrated annual report, most of our data is presented at TenneT Holding level. To give more insight in our operations, KPIs in this document are presented on TenneT Holding level and country level. We have presented the data in line with the structure of the integrated annual report.

For definitions of the reported KPIs please go to the [CSR section of our website](#).

In case there any additional questions considering CSR reporting, please send an email to [CSR@tennet.eu](mailto:CSR@tennet.eu).



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# 1. About TenneT

## 1.1. Our stakeholders

On a daily basis, we are in contact with our stakeholders and aim to include their considerations where possible, in the policies we make and the actions we take. We regularly request them to provide their views and input with respect to topics that relate to how we create long term value and are deemed to be material and of strategic importance to us. In 2021, we redefined our main stakeholders. We performed an internal assessment with our senior leaders to ask which stakeholders they work with on a regular basis. We also performed a media analysis to make sure we included all relevant stakeholders. We then assessed to what extent we influence these stakeholders and to what extent they influence us. This resulted in a stakeholder matrix, through which we were able to determine who our key stakeholders are.

In the table below, we have included the identified key stakeholders, which key topics and concerns have been raised in 2021 and where we have addressed these in our reporting, in line with GRI102 – 44.

Stakeholder group	Method of engagement	Key topics and concerns raised	Disclosed in IAR chapter
Customers	Informative, close involvement in various areas and contractual agreements	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Security of supply</li> <li>• TenneT's own environmental impact</li> <li>• Responsible supply chain practices</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure a high security of supply</li> <li>• Solve societal challenges with stakeholders and through partnerships</li> </ul>
Employees	Close involvement	<ul style="list-style-type: none"> <li>• Security of supply</li> <li>• Safety</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy and value creation</li> <li>• Create a sustainable workplace</li> </ul>
Regulators & legal bodies	Informative and close involvement	<ul style="list-style-type: none"> <li>• Financial health</li> <li>• Security of supply</li> <li>• Driving the energy transition</li> </ul>	<ul style="list-style-type: none"> <li>• Secure sustainable financial performance and investor ratings</li> <li>• Ensure critical infrastructure for society</li> <li>• Deliver a high security of supply</li> </ul>
Non-governmental organisations (NGOs)	Informative, cooperative, consulting and involvement on project level	<ul style="list-style-type: none"> <li>• TenneT's own environmental impact</li> <li>• Driving the energy transition</li> <li>• Strategic partnerships</li> <li>• Stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Solve societal challenges with stakeholders and through partnerships</li> <li>• Create value to transition to a climate-neutral economy</li> <li>• Ensure critical infrastructure for society</li> <li>• Create a sustainable workplace</li> </ul>
Energy market	Close involvement	<ul style="list-style-type: none"> <li>• Security of supply</li> <li>• Driving the energy transition</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver a high security of supply</li> <li>• Solve societal challenges with stakeholders and through partnerships</li> </ul>
Shareholders & capital providers (Corporate and projects)	Close involvement	<ul style="list-style-type: none"> <li>• Financial health</li> <li>• Security of supply</li> <li>• Stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy and value creation</li> <li>• Create a sustainable workplace</li> <li>• Secure sustainable financial performance and investor ratings</li> </ul>
Suppliers	Market consultations, pre-qualifications, negotiations, meetings	<ul style="list-style-type: none"> <li>• Security of supply</li> <li>• Safety</li> <li>• Responsible supply chain practices</li> <li>• Strategic partnerships</li> <li>• Driving the energy transition</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure critical infrastructure for society</li> <li>• Create value to transition to a climate neutral economy</li> <li>• Create a sustainable workplace</li> </ul>
Governments and government bodies	Meetings	<ul style="list-style-type: none"> <li>• Financial health</li> <li>• Security of supply</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure critical infrastructure for society</li> <li>• Secure sustainable financial performance and investor ratings</li> </ul>



## 1.2. Materiality analysis

In line with our policy to perform a materiality analysis every two years, our most recent analysis was completed in 2021. We drafted a list of potentially material topics by reviewing our previous list of topics, analysing news- and media articles related to TenneT, reviewing topics from the GRI- and SASB standards and reviewing annual reports from other European DSOs and TSOs. With this list of topics, we reached out to our stakeholders and asked them to rank topics based on how much they are influenced by this topic. We also asked them whether they believed any topics were missing from the list, to verify the relevance of the selected topics. We then performed an internal assessment to determine on what topics TenneT has a low, medium or high impact, by including the perspectives of our senior leaders from the respective departments. When combining these two outcomes, we were able to determine which topics TenneT has 1) a high impact on and 2) significantly influence our stakeholders, which resulted in a materiality matrix. Security of supply, financial health and driving the energy transition were re-established as material topics, and safety has also been added as a material topic. The results of the materiality analysis and how we deal with these topics in terms of reporting can be found in our IAR2021, p.176-178.

## 1.3. TenneT in the supply chain

In our annual report, we have disclosed information on our supply chain management and the way we are aiming to help suppliers we work with to meet our standards with respect to sustainable business practices. In designing, building and maintaining our assets, we purchase goods and services on a global market, from the Netherlands and Germany to e.g. Singapore. These suppliers relate to either contractors that realise our projects and suppliers that deliver goods directly for building and maintaining our grid. Supply chain management is embedded in our policies and procedures in various ways. An important element of this is related to our Supplier Code of Conduct (SCoC), in which we have integrated our view on sustainable business practices. We require all our suppliers to comply with the SCoC, if they would like to do business with us. The SCoC includes principles based on UN Global Compact and the International Labour Organisation.

To us, being a responsible grid operator doesn't mean that we just focus on what occurs within our own organisational boundaries. We aim to work together with our suppliers in our ambition to take on more and more responsibility in our supply chain over time. To us, compliance to the SCoC is a minimum requirement and we also monitor whether they have complied to this when we tender for goods and services. In addition, we perform supplier visits to prevent and mitigate potential misconduct that doesn't meet our standards with respect to quality, environmental and social performance. This is internally recorded and monitored and we report our performance in this area in our Integrated Annual Report. Based on these supplier visits, suppliers are informed that they are either accepted, given the opportunity to make improvements or not accepted, which was the case in three instances in 2021. New suppliers are informed about the results and whether they are accepted as a supplier, before they are allowed to provide goods and services to us. If non-compliance occurs, our policy is to reach out to the respective supplier to discuss this matter and how this can be resolved. By sharing our views and standards with respect to sustainable business practices, we aim to bring this to a higher level, also for our business partners in the supply chain. In the next years, we strive to further develop our policies and procedures in this area and we will communicate our progress on this in our annual reporting.

## 1.4. How we create value

In our Integrated annual report, we describe how we aim to create long term value, from inputs to outputs and outcomes/impacts. Determining the outcomes/impacts of an organisation is something that we as TenneT have been working on and are still further developing to provide our stakeholders with more insights on TenneT's performance. In the visual included in our Integrated Annual Report 2021 (p.14-15), we show per 'capital', how each of these are impacted by our purpose, promise, principles, our strategic approach and the end to end processes and lead to outputs, outcomes and impacts. Outputs of the respective capitals are measured by means of key performance indicators. This results in internal or external consequences as a result of these outputs and their respective impact in a broader societal sense. The insights from this on itself can have an effect on the input, as we strive to reduce our negative impacts and increase our positive impacts over time. For example, we do this by evaluating the results of our policies and actions via the committees and boards which are mentioned in the 'Governance of CSR' section in IAR2021, page 180.

The aforementioned outcomes and impacts for society can be described in multiple ways, such as our human input capital can result in more satisfied employees or in the longer run to better developed



work force. Next to this, this also has negative impacts for instance due to safety incidents. With respect to financial input capitals, this can lead to societal benefits as salary payments for society, being either employees, suppliers or taxes and on the other hand also leads to expenditures and societal costs.

To take a next step in showing how we create value not only in the short but also in the longer run, we started in 2020 with quantifying the outcomes/impacts of our societal impact on intellectual capital and natural capital. In 2021, we added a metric to quantify our societal impact on financial capital. In the end, we believe that although impacts are primarily linked to a certain capital, this is not merely the consequence of one capital. For example: the societal impact we have by the availability of our grid is not only enabled by our intellectual capital, but it requires other capitals as well, such as produced capital or financial capital. That is why as of IAR2021, we have also connected them to the SDGs we believe we can contribute to but are elaborated on in the chapters we believe is the key capital that enables this impact.

The SDGs we have included currently in our assessment are SDG13, which is the global trend we believe we can contribute to the most and SDG7 & SDG9 which are the two SDGs we can make the most impact on due to the nature of our business. We have also started investigating the opportunities to measure impacts related to SDG8. As we believe that we have made a good start with this but want to investigate this in further detail, we decided to include elements of this in the additional CSR data document.

### **Intellectual capital**

Our main societal impact is related to our core task: transmitting electricity and securing high grid availability. With this, we power and empower society, together with others in the electricity supply chain, such as electricity generating companies and DSOs. This relates to SDG 9 and specifically target target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being

Being able to supply electricity has a certain value, based on research performed by the SEO economic research organisation. In their research 'The value of supply security: The costs of power interruptions: Economic input for damage reduction and investment in networks' (De Nooij, M, Koopmans, C and Bijvoet, C, 2006) the researchers state that 'electricity not delivered' also has a certain value. This is on the one hand based on the economic value diminished based on the gross domestic product. On the other hand this relates to the value diminished for consumers that, for instance are not being able to enjoy leisure time. Based on interviews conducted with one of the authors, the same value can be applied for electricity that has been supplied. This is our basis for estimating the societal value due to the availability of our grid.

Our first assessments were focussed on our Dutch operations, as the researchers have focussed on the Dutch situation as well. To make this estimation more accurate, we have updated the calculation models used by the researchers with the most recent available) data from the Centraal Bureau voor de Statistiek and used the 2021 data available from our own systems to estimate the societal value due to the availability of or grid. The result of this estimation is that the total value exceeds the Dutch gross domestic product, which has also been validated with the co-author of the study.

These are just the first steps in our journey to estimate this value, as next steps are still to be taken, such as determining the value that also includes the German part of our grid. We invite others to share their thoughts in further developing this.

### **Natural capital**

As TenneT, we are aware that we have an impact on the environment when building, maintaining and operating the grid. Impacts relate to our carbon footprint and on the biodiversity of the areas our assets are built. We are investigating how we can further quantify these impacts. Last year, we have started by including the impacts related to connecting renewable energy sources to our grid. In IAR2021, we included the outcome/impact in two ways with respect to this, being the equivalent number of households that in theory would have been able to switch to 100% renewable electricity and the carbon emissions that we have been able to help avoid, by connecting renewable energy sources to our grid. The basis of both indicators is related to the amount of green electricity sources we have been able to connect to our grid. The total of his has been divided by the consumption of an average household in the respective part of our service area for the equivalent number of households that have been able to switch to 100% renewable electricity. For the avoided emissions, we have



multiplied the aforementioned total with the most recent average grid mix in the Netherlands and Germany available at the time of reporting this information internally and externally via our IAR2021. By avoiding emissions, we contribute to SDG13, target 13.2(.2), which we have chosen to not report the output indicator being the total greenhouse gas emissions here (which we do reporting in IAR2021 and in this document), but the emissions we help to avoid by connecting green electricity to our grid (i.e. via our offshore connections). The equivalent number of households that in theory would have been able to switch to 100% renewable electricity directly connects to SDG 7, target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix. We express this in a theoretical equivalent number of households.

### Financial capital

In 2021, we have added a new metric to measure our societal impact in terms of financial capital. This new metric expresses target 7.1 'By 2030, ensure universal access to affordable, reliable and modern energy services' in the percentage of our costs as part of the electricity bill of an average household. As we are a regulated company and our revenue consists of regulated income, it is important for us to make responsible financial choices and keep in mind the impact of financial decisions on stakeholders like our shareholder, the Dutch Ministry of Finance and the people that live in the area's we serve. We have calculated our societal financial impact on households in our service area by calculating the share of TenneT's cost on an electricity bill of a 'typical' three-person Dutch and German household. We gathered data on the financial components of an electricity bill for such a household, for example the retail price of electricity, taxes and levies and (DSO) grid fees. We were then able to determine big the share of TenneT's grid fees is on the electricity bill of a typical Dutch- or German household. In Germany, we made use of 2021 data in the *BDEW Strompreisanalyse*. In the Netherlands, we used the most recent available data from CBS.

## 1.5.Social charters

As TenneT, we have committed ourselves to certain public charters. As mentioned in IAR2021, this relates to the UN Global Compact (we report our progress via a separate report, refer to: <https://www.tennet.eu/nl/bedrijf/mvo-en-duurzaamheid/download-reports/> where we have included our UN Global Compact Communication on Progress report) and the OECD (Organisation for Economic Development) guidelines. In the table below we have included a reference to the chapters where we provide more information on this.

OECD themes	Chapter
<b>Disclosure</b>	More transparency with respect to our policies and activities is disclosed in various parts of our reporting, such as IAR2021, GFR2021 and our website <a href="http://www.tennet.eu">www.tennet.eu</a> .
<b>Human rights</b>	<ul style="list-style-type: none"> <li>• Ensure critical infrastructure for society; Supply chain management</li> </ul>
<b>Employment and industrial relations</b>	<ul style="list-style-type: none"> <li>• Ensure critical infrastructure for society; Supply chain management</li> <li>• Create a sustainable workplace</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Create value to transition to a climate neutral economy</li> <li>• Green Finance Report 2021</li> <li>• Additional CSR Data Document 2021</li> </ul>
<b>Combating bribery, bribe solicitations and extortion</b>	<ul style="list-style-type: none"> <li>• Compliance and integrity</li> <li>• <a href="https://www.tennet.eu/company/compliance/compliance-at-tennet/">https://www.tennet.eu/company/compliance/compliance-at-tennet/</a></li> </ul>
<b>Consumer interests</b>	<ul style="list-style-type: none"> <li>• Solve societal challenges with stakeholders and through partnerships</li> </ul>



<b>OECD themes</b>	<b>Chapter</b>
<b>Science and technology</b>	<ul style="list-style-type: none"><li>• Solve societal challenges with stakeholders and through partnerships</li><li>• Deliver a high security of supply</li></ul>
<b>Competition</b>	<ul style="list-style-type: none"><li>• Secure sustainable financial performance and investor ratings</li><li>• Governance and Risk Management</li><li>• Consolidated financial statements</li></ul>
<b>Taxation</b>	<ul style="list-style-type: none"><li>• Consolidated financial statements</li></ul>





## 2. Our performance in 2021

### 2.1. Deliver a high security of supply

As an European TSO, our main task is to secure supply of electricity for the people that live in our service area. TenneT's track record in grid availability is among the best in the world. We work hard to guarantee a reliable electricity grid, a task that is complicated by the volatility of renewable energy, which makes it harder to balance supply with the rising demand. This is one of the main elements of how we as a company create value. Our key performance indicator with respect to this important output is related to the availability of our grid.

#### 2.1.1. Grid availability

In the table below, our onshore grid availability is presented:

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Grid availability	99.999998%	100.000000%	99.999999%	99.99999%	100.00000%	99.99999%	99.99998%	100.00000%	99.99998%
110/150 kV									
Interruptions	3	N/A	3	3	N/A	3	12	N/A	12
Energy not transported (MWh)	4	N/A	4	17	N/A	17	10,556	N/A	10,556
220/380 kV									
Interruptions	-	-	-	-	-	-	1	1	2
Energy not transported	-	-	-	-	-	-	156	0.22	156

Our total onshore grid availability (ASIDI) is reported as the sum of the availability on the national grids, thereby underestimating the availability for TenneT as a whole. The industry has defined two standard KPIs for grid availability reporting. The SAIDI (System Average Interruption Duration Index) is the average outage duration for each customer served. The ASIDI (Average System Interruption Duration Index) is the average outage duration for interrupted active power flow. Since 2017 TenneT reports according to GRI Standards, which requires more extensive reporting on the identified materials themes. For grid availability this means the SAIDI and ASIDI are reported from 2017.

	2021		2020		2019	
	NL	D	NL	D	NL	D
SAIDI						
110/150 kV	0.07	N/A	0.27	N/A	0.94	N/A
220/380 kV	-	N/A	-	N/A	-	N/A
ASIDI						
110/150 kV	N/A	N/A	N/A	N/A	N/A	N/A
220/380 kV	-	-	-	-	4.19	-



## 2.2. Ensure a critical infrastructure for society

To ensure that we are able to keep our high level our grid availability, we are working hard to maintain our current grid and design and build on a daily basis to help shape the future energy landscape to be able to secure supply not only today but also tomorrow. We are proud that we have been able to exceed our budgeted amount of investments and the progress related to that, despite setbacks we have experienced at some of our projects. This results in the critical infrastructure we are operating 24 hours a day, 365 days a year.

### 2.2.1. Technical data

In the table below, we have included more information with respect to the critical infrastructure we have realised and are maintaining.

Technical data	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Number of substations:									
110/150 kV	289	4	293	289	5	294	288	5	293
220/380 kV	50	132	182	46	128	174	44	125	169
<b>Total number of substations</b>	<b>339</b>	<b>136</b>	<b>475</b>	<b>335</b>	<b>133</b>	<b>468</b>	<b>332</b>	<b>130</b>	<b>462</b>
HVDC converter stations	3	19	22	3	18	21	3	18	21
Connected offshore windfarms	-	22	22	-	22	22	-	21	21
Circuit length:									
Underground total	2,794	2,851	5,645	2,708	2,221	4,929	2,530	2,176	4,316
Overhead total	8,165	10,708	18,873	8,166	10,771	18,937	8,167	10,804	18,916
<b>Total</b>	<b>10,959</b>	<b>13,559</b>	<b>24,518</b>	<b>10,874</b>	<b>12,992</b>	<b>23,866</b>	<b>10,697</b>	<b>12,980</b>	<b>23,232</b>
150/300/450 kV DC	583	2,117	2,700	583	1,494	2,077	583	1,495	2,078
220/380 kV	3,337	10,727	14,064	3,334	10,782	14,116	3,199	10,795	13,994
110/150 kV	7,039	715	7,754	6,957	716	7,673	6,915	690	7,605
<b>Total</b>	<b>10,959</b>	<b>13,559</b>	<b>24,518</b>	<b>10,874</b>	<b>12,992</b>	<b>23,866</b>	<b>10,697</b>	<b>12,980</b>	<b>23,677</b>

## 2.3. Create a sustainable workplace

Our people are our most valuable asset. They are the key to our continued success and growth. That's why we create a safe, healthy, stimulating and energising place for them to work, grow and to bring the best in them. Over 6,620 employees contribute to our mission to provide a secure and reliable supply of electricity, 24 hours a day, 365 days a year. Next to this, we also make use of contractors, e.g. to help us in realising our projects. We aim to work together with our contractors, for instance when it comes to creating a safe working environment. In the tables below additional data regarding FTE, headcount, permanent/temporary contracts, CAO/function contracts, male/female ratios, age distribution, inflow/outflow, management/non-management, full-time/part-time employees and education costs is presented. In our current strategy, we focus on a safe and inclusive working environment and on energising our people. In the tables below, we provide more insight on our diversity and safety focus areas.

### 2.3.1. Employee data

FTE (end of period)	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
FTE internal	2,045	2,894	4,939	1,723	2,417	4,140	1,723	2,417	4,140
FTE external	903	357	1,260	669	357	1,026	669	357	1,026
<b>Total</b>	<b>2,948</b>	<b>3,251</b>	<b>6,199</b>	<b>2,392</b>	<b>2,774</b>	<b>5,166</b>	<b>2,392</b>	<b>2,774</b>	<b>5,166</b>

Headcount (end of period)	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Headcount internal	2,122	3,046	5,168	1,789	2,532	4,321	1,580	2,188	3,768
Headcount external	1,088	364	1,452	1,038	363	1,401	809	336	1,145
<b>Total</b>	<b>3,210</b>	<b>3,410</b>	<b>6,620</b>	<b>2,827</b>	<b>2,895</b>	<b>5,722</b>	<b>2,389</b>	<b>2,524</b>	<b>4,913</b>

Headcount (end of period)	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Permanent contract	1,797	2,591	4,388	1,549	2,166	3,715	1,402	1,904	3,306
Temporary contract	325	455	780	240	366	606	178	284	462
<b>Total</b>	<b>2,122</b>	<b>3,046</b>	<b>5,168</b>	<b>1,789</b>	<b>2,532</b>	<b>4,321</b>	<b>1,580</b>	<b>2,188</b>	<b>3,768</b>



	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Permanent contract</b>									
Permanent contract male	1,377	2,000	3,377	1,549	1,713	3,262	1,086	1,533	2,619
Permanent contract female	420	591	1,011	240	453	693	316	371	687
<b>Total</b>	<b>1,797</b>	<b>2,591</b>	<b>4,388</b>	<b>1,789</b>	<b>2,166</b>	<b>3,955</b>	<b>1,402</b>	<b>1,904</b>	<b>3,306</b>
% male	77%	77%	77%	87%	79%	82%	77%	81%	79%
% female	23%	23%	23%	13%	21%	18%	23%	19%	21%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Temporary contract</b>									
Temporary contract male	238	261	499	178	194	372	137	157	294
Temporary contract female	8	194	202	62	172	234	41	127	168
<b>Total</b>	<b>246</b>	<b>455</b>	<b>701</b>	<b>240</b>	<b>366</b>	<b>606</b>	<b>178</b>	<b>284</b>	<b>462</b>
% male	97%	57%	71%	74%	53%	61%	77%	55%	64%
% female	3%	43%	29%	26%	47%	39%	23%	45%	36%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Collective labour contracts</b>	<b>86%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>83%</b>	<b>83%</b>	<b>85%</b>	<b>82%</b>	<b>83%</b>

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal gender</b>									
Male	1,615	2,261	3,876	1,378	1,907	3,285	1,223	1,690	2,913
Female	507	785	1,292	411	625	1,036	357	498	855
<b>Total</b>	<b>2,122</b>	<b>3,046</b>	<b>5,168</b>	<b>1,789</b>	<b>2,532</b>	<b>4,321</b>	<b>1,580</b>	<b>2,188</b>	<b>3,768</b>
% male	76%	74%	75%	77%	75%	76%	77%	77%	77%
% female	24%	26%	25%	23%	25%	24%	23%	23%	23%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal by age</b>									
Under 20 years	4	41	45	1	33	34	6	32	38
20-30 years	193	678	871	134	524	658	109	437	546
30-40 years	494	1,142	1,636	393	932	1,325	345	793	1,138
40-50 years	670	613	1,283	583	522	1,105	526	457	983
50-60 years	544	466	1,010	485	438	923	424	389	813
Over 60 years	217	106	323	193	83	276	170	80	250
<b>Total</b>	<b>2,122</b>	<b>3,046</b>	<b>5,168</b>	<b>1,789</b>	<b>2,532</b>	<b>4,321</b>	<b>1,580</b>	<b>2,188</b>	<b>3,768</b>

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal inflow</b>									
Male	332	399	731	233	314	547	185	246	431
Female	124	461	585	84	187	271	56	135	191
<b>Total</b>	<b>456</b>	<b>860</b>	<b>1,316</b>	<b>317</b>	<b>501</b>	<b>818</b>	<b>241</b>	<b>381</b>	<b>622</b>
% male	73%	46%	56%	74%	63%	67%	77%	65%	69%
% female	27%	54%	44%	26%	37%	33%	23%	35%	31%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal outflow</b>									
Male	95	50	145	78	95	173	82	104	186
Female	28	109	137	30	64	94	28	61	89
<b>Total</b>	<b>123</b>	<b>159</b>	<b>282</b>	<b>108</b>	<b>159</b>	<b>267</b>	<b>110</b>	<b>165</b>	<b>275</b>
% male	77%	31%	51%	72%	60%	65%	75%	63%	68%
% female	23%	69%	49%	28%	40%	35%	25%	37%	32%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal management</b>									
Male	128	54	182	128	47	175	100	116	216
Female	41	9	50	41	10	51	26	17	43
<b>Total</b>	<b>169</b>	<b>63</b>	<b>232</b>	<b>169</b>	<b>57</b>	<b>226</b>	<b>126</b>	<b>133</b>	<b>259</b>
% male	76%	86%	78%	76%	82%	77%	79%	87%	83%
% female	24%	14%	22%	24%	18%	23%	21%	13%	17%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>Headcount internal non-management</b>									
Male	1,487	2,207	3,694	1,250	1,860	3,110	1,123	1,574	2,697
Female	466	776	1,242	370	615	985	331	481	812
<b>Total</b>	<b>1,953</b>	<b>2,983</b>	<b>4,936</b>	<b>1,620</b>	<b>2,475</b>	<b>4,095</b>	<b>1,454</b>	<b>2,055</b>	<b>3,509</b>
% male	76%	74%	75%	77%	75%	76%	77%	77%	77%
% female	24%	26%	25%	23%	25%	24%	23%	23%	23%



	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Headcount internal full-time									
Male	1,468	2,124	3,592	1,256	1,796	3,052	1,112	1,596	2,708
Female	229	544	773	186	440	606	133	342	475
Total	1,697	2,668	4,365	1,422	2,236	3,658	1,245	1,938	3,183
% male	87%	80%	82%	88%	80%	83%	89%	82%	85%
% female	13%	20%	18%	12%	20%	17%	11%	18%	15%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Headcount internal part-time									
Male	147	137	284	122	111	233	111	94	205
Female	278	241	519	245	185	430	224	156	380
Total	425	378	803	367	296	663	335	250	585
% male	35%	36%	35%	33%	38%	35%	33%	38%	35%
% female	65%	64%	65%	67%	63%	65%	67%	62%	65%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Newly hired females at management level	0%	0%	0%	30%	27%	29%	15%	15%	15%

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	NL
Average education costs per employee	2,335	2,181	2,245	2,355	1,766	2,010	2,008	2,180	2,108

### 2.3.2. Remuneration

We reward our employees for their work by offering an appropriate package of salary, pension and secondary benefits. To illustrate the difference in remuneration between the highest full-time salary and median fulltime salary at TenneT, we have calculated the ratio of fixed salary (including acquired leave days), variable remuneration and pension benefits.

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	NL
Ratio CEO to median	5.4	5.6	5.4	5.3	5.7	5.6	5.5	5.6	5.6

### 2.3.3. Health

We help our people to live healthy and active lives, and find a stimulating work-life balance. We encourage all employees to join our Always Energy programme, which is open to all our employees. In 2021, the majority of this program was redesigned and adapted to align with national COVID-19 measures, which prevented us to have our programme in the traditional way. Nevertheless, having this programme proved to be perhaps even more needed, as working from home - away from the office and ones colleagues - provides different challenges to face. That is why the Always Energy programme focussed on both physical and mental health activities that all colleagues could attend and perform themselves online, at home or outside considering the local COVID-19 measures. This has resulted in dozens of activities being organised for our employees, related to running, hiking, cycling yoga and other activities related to either mental or physical health. This also includes online workshops and webinars, which were attended by approximately 400 of our employees. Furthermore virtual challenges were organised, where around 2,200 participants were motivated to make healthy choices such as a daily walk or attending events to remain connected with other team members. In total, almost 3,500 participants took part in the Always Energy programme.

### 2.3.4. Safety

The safety of everyone involved in our activities – our employees and our contractors – is a top priority. We continually strive for zero work-related incidents and accidents. Our goal is to become a safety leader and to have a pro-active safety culture. We aim to be recognised as such by our own employees as well as by our stakeholders. Our safety performance is presented in the tables below, which includes (potential) incidents related to employees and contractors and is presented on group level as well as per country.

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
LTIF	1.2	5.3	3.1	2.0	5.8	3.2	2.7	6.0	3.6
TRIR	3.2	8.7	5.8	1.0	6.5	4.1	2.7	6.8	4.8
HRI	14	15	29	19	15	-	19	28	47
Fatalities	-	3	3	-	2	2	-	-	-



	2021		
	NL	D	Total
<b>Employees</b>			
Work-related injuries (#)	7	18	25
TRIR	1.47	3.89	2.66
LTIF	0.63	1.73	1.17
Severe incidents (#) and (per mio hours worked)	-	-	-
Fatalities (#) and (per mio hours worked)	-	-	-
High risk incidents	1	1	2
<b>Contractors</b>			
Work-related injuries (#)	39	91	130
TRIR	4.14	11.45	5.79
LTIF	1.48	7.30	7.48
Severe incidents (#)	-	5	3
Severe incidents (per mio hours worked)	-	0.63	0.11
Fatalities (#)	-	3	3
Fatalities (per mio hours worked)	-	0.38	0.17
High risk incidents	13	14	27

In general, TenneT promotes "the 6 Life-saving Rules" that all employees, in the office- or on construction sites, are regularly made aware of. These rules relate to the main safety hazards, such as working with electrical installations or working at height and promote the use of protective gear and following safety guidelines. Work-related hazards within specific departments are determined through risk assessments. A risk assessment identifies and evaluates risks related to work-related activities in that department. It also establishes guidelines on how to manage these risks and how to report on (potential) incidents. All incidents are recorded in our incident reporting system, Zenya. All actual and potential severe and fatal incidents require a mandatory investigation. Our safety department also reports on situations with an increased likelihood of incidents such as the location of the incident, the department involved or the time of day. Based on insights from incident investigations, measures are defined and implemented to prevent future incidents.

## 2.4. Create value to transition to a climate neutral economy

As TenneT, we believe that we are able to make a significant contribution with respect to the energy transition. With the knowledge and experience we have gained in more than 20 years of securing supply of electricity to the people that live in the areas we serve, we want to serve society and help shape the future energy landscape. To us, this means that we also want to set the right example ourselves in being a green and responsible grid operator. That is why we have defined ambitions and targets to reduce our own impact with respect to climate, circularity and nature.

### 2.4.1. Climate

We present our gross CO<sub>2</sub> footprint for 2021, 2020 and 2019 in three scopes: direct emissions from our own operations; indirect emissions related to purchased energy; and indirect emissions related to other purchased goods. Our net carbon footprint takes into account our measures to green our electricity use, resulting in a lower carbon footprint. Our calculations are based on the CO<sub>2</sub> Footprint Network Operators Manual of the Association of Energy Network Operators in the Netherlands, and conversion factors from CO<sub>2</sub>emissiefactoren.nl and document "Entwicklung der spezifischen Kohlendioxid- Emissionen des deutschen Strommix in den Jahren 1990 bis 2020". The detailed carbon footprint of 2021 is presented below. The adjusted 2020 and 2019 figures can be found in the appendix.

2021								
Scope 1			conversion factor				emission in ton CO <sub>2</sub> e	net emissions in ton CO <sub>2</sub>
<b>Lease</b>								
14,688,260	km	DE	0.000145	ton CO <sub>2</sub> /km			2,130	2,130
13,916,028	km	NL	0.000145	ton CO <sub>2</sub> /km			2,018	2,018
<b>Total Lease</b>							<b>4,148</b>	<b>4,148</b>
<b>Gas use offices</b>								
6.42	GWh	DE	183	tonnes CO <sub>2</sub> e/GWh			1,175	
324,825.00	m <sup>3</sup>	NL	0.001788	ton CO <sub>2</sub> e/m <sup>3</sup>			581	-
<b>Total energy use office</b>							<b>1,756</b>	<b>-</b>
<b>SF6 leakage</b>								
116.38	kg	DE	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>			2,735	2,735
883.00	kg	NL	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>			20,751	20,751
<b>Total SF6 leakage</b>							<b>23,485</b>	<b>23,485</b>
<b>Total Scope 1</b>							<b>29,389</b>	<b>27,633</b>



<b>Scope 2</b>								
<b>Electricity use offices</b>								
3.83	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	1,402			
6.50	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	2,951		-	
<b>Total Electricity use offices</b>						<b>4,353</b>	<b>-</b>	
<b>Grid losses</b>								
4,125.88	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	1,510,072		679,532	
1,479.00	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	671,466		-	
<b>Total grid losses</b>						<b>2,181,538</b>	<b>679,532</b>	
<b>Electricity use stations</b>								
215	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	78,690			
20	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	9,080		-	
<b>Total Electricity use stations</b>						<b>87,770</b>	<b>-</b>	
<b>Total Scope 2</b>						<b>2,273,661</b>	<b>679,532</b>	
<b>Scope 3</b>								
<b>Business and commute</b>								
4,262,500	km	DE	0.000163	ton CO <sub>2</sub> /km	695		695	
3,962,131	km	NL	0.000145	ton CO <sub>2</sub> /km	575		575	
<b>Total business and commute</b>						<b>1,269</b>	<b>1,269</b>	
<b>Air travel</b>								
492,483	km	DE	0.000202	ton CO <sub>2</sub> /km	99		99	
3,375,876	km	NL	0.000202	ton CO <sub>2</sub> /km	682		682	
<b>Total air travel</b>						<b>781</b>	<b>781</b>	
<b>Train</b>								
1,295,075	km	DE	0.000002	ton CO <sub>2</sub> /km	3		3	
641,040	km	NL	0.000002	ton CO <sub>2</sub> /km	1		1	
<b>Total Train</b>						<b>4</b>	<b>4</b>	
<b>Offshore transport</b>								
<b>Helicopters</b>								
613,983	l	DE	0.00354	ton CO <sub>2</sub> /l	2,173		2,173	
<b>Supply vessels</b>								
1,717,250	l	DE	0.002719	ton CO <sub>2</sub> /l	4,669		4,669	
<b>Total offshore transport</b>						<b>6,843</b>	<b>6,843</b>	
<b>Total Scope 3</b>						<b>8,897</b>	<b>8,897</b>	
<b>Total</b>						<b>2,311,947</b>	<b>716,063</b>	



## Grid losses

TenneT's main impact with respect to climate is related to grid losses. Around 95% of our carbon footprint is related to this. Grid losses are calculated as the difference between the amounts of the electricity produced entering our transmission system and the amount that leaves our system for consumption. The grid losses presented per country and voltage level can be found in the table below.

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
<b>110/150 kV</b>									
Grid losses (GWh)	317	N/A	317	375	N/A	375	382	N/A	382
Transported (GWh)	80,814	N/A	80,814	82,791	N/A	82,791	89,618	N/A	89,618
<b>% grid losses of transported GWh</b>	<b>0.39%</b>	<b>N/A</b>	<b>0.39%</b>	<b>0.45%</b>	<b>N/A</b>	<b>0.45%</b>	<b>0.43%</b>	<b>N/A</b>	<b>0.43%</b>
<b>220/380 kV</b>									
Grid losses (GWh)	1,162	4,126	5,288	952	4,209	5,161	868	3,785	4,653
Transported GWh	78,686	180,905	259,591	71,457	173,023	244,480	74,358	164,464	238,822
<b>% grid losses of transported GWh</b>	<b>1.48%</b>	<b>2.28%</b>	<b>2.04%</b>	<b>1.33%</b>	<b>2.43%</b>	<b>2.11%</b>	<b>1.17%</b>	<b>2.30%</b>	<b>1.95%</b>
<b>Total grid losses (GWh)</b>	<b>1,479</b>	<b>4,126</b>	<b>5,605</b>	<b>1,327</b>	<b>4,209</b>	<b>5,536</b>	<b>1,250</b>	<b>3,785</b>	<b>5,035</b>

## SF<sub>6</sub>

SF<sub>6</sub> is used in high-voltage equipment on substations because it is an excellent electrical insulator and necessary for interrupting currents in circuit breakers. However, SF<sub>6</sub> is a strong contributor to greenhouse gas emissions, as it is over 23,000 times more polluting than CO<sub>2</sub>. Below the leaked and banked amounts are reported.

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
SF <sub>6</sub> leaked (kg)	883	116	999	1,055	-	1,055	862	117	979
SF <sub>6</sub> banked (kg)	183,423	268,032	451,455	171,053	215,732	386,785	163,661	236,315	399,976
<b>SF<sub>6</sub> leaked %</b>	<b>0.48%</b>	<b>0.04%</b>	<b>0.22%</b>	<b>0.62%</b>	<b>0.00%</b>	<b>0.27%</b>	<b>0.53%</b>	<b>0.05%</b>	<b>0.24%</b>

## 2.4.2. Circularity

As part of our strategy to drive the energy transition and lead as a green grid operator, we have included our ambition to minimise use of scarce materials, reusing materials and reducing waste in our operations. To this extent, we are currently working on obtaining more insights in the materials we use by means of obtaining material passports from our suppliers and identifying all sources of waste. Based on the insights currently available, we have estimated a range for both metrics. For waste, this relates to the available 2020 data of our offices, onshore- and offshore operations and onshore projects. In the coming years, we aim to improve data quality and gain more data, for example on our offshore projects. For virgin copper, we gained more insight this year into raw material passports obtained from suppliers, and on the use of virgin copper in our transformers and cables. We aim to reduce both the use of virgin copper, as well as non-recyclable waste with 25% by 2025 compared to 2020.

## 2.4.3. Nature

### Environmental incidents

With our operations we have undoubtedly an impact on nature. We recognise that we have a responsibility to care for the well-being of the natural environment, and are therefore transparent about the oil leakages and environmental incidents caused by our actions. This year, we broadened the scope of an environmental incident by also including oil leakages that result from so called "sweating" of assets. Some of our high voltage cable connections contain oil, which under certain circumstances could leak from the connection system and needs to be refilled. These relatively small leakages of oil are referred to as "sweating". From a precautionary principle, we took into account the refills of oil to our cable connections when calculating the number of environmental incidents this year.

	2021			2020			2019		
	NL	D	Total	NL	D	Total	NL	D	Total
Oil Leaked (litres)	1,798	-	1,798	5,391	-	5,391	1,842	1,995	3,837
Environmental incidents	40	41	81	29	28	57	24	26	50



## 2.5. Secure sustainable financial performance and investor ratings

We notice that there is a growing interest from the investor community with respect to our Environmental Social and Governance (ESG) policies and performance. This growing interest is also visible when it comes to our green bonds and other forms of green financing.

In 2021, Standard & Poor's has performed an ESG evaluation, an assessment of its ability to operate successfully, now and in the future. Standard & Poor's awarded TenneT the classification 'strong', with a score of 84 out of 100. For more information with respect to this evaluation, please read the full [report](#). In 2021, Sustainalytics performed their ESG evaluation and ranked us in the 'low risk' categories, amongst the frontrunners in our sector.











To finance its renewable energy activities, TenneT has developed a Green Financing Framework, which is aligned to the ICMA Green Bond Principles published in June 2018 and the LMA Green Loan Principles published in December 2018. As part of this framework, we have committed ourselves to report on certain performance data with respect to our green financing instruments issued. That is why we publish our Green Finance Report on an annual basis. Here we provide information on the advancement of proceeds and projects, as well as performance information regarding the projects included in the Green Finance portfolio such as the environmental and safety performance of these projects. Our 2021 Green Finance Report is available on our [website](#).






## 2.6. Solve societal challenges with stakeholders and through partnerships


We believe in the power of partnerships and that these are crucial in achieving our goals with respect to the future energy landscape and helping society transition to a low carbon economy. We are working with many stakeholders to find solutions and solve these societal challenges. As we have many partnerships, we have highlighted a selection of this in the overview below.

Partner	Logo	Description
<b>Drive the energy transition</b>		
<b>North Sea Wind Power Hub</b>		A partnership together with Energinet, Gasunie and the Port of Rotterdam to evaluate and develop technical concepts for an internationally coordinated roll out of 'hub-and-spoke' powerhubs in the North Sea to help shape a more integrated European energy market.
<b>NSON II</b>		Together with project partners Fraunhofer IEE, Leibniz University Hanover and University of Kassel, TenneT has been invited by the German Federal Ministry of Economic Affairs and Energy (BMWi) to participate in this research project, which explores the cost efficient and international integrated connection of offshore wind energy in the North Sea. TenneT's main input is in system and grid control and optimised (grid-) planning and operation of offshore systems.
<b>Infrastructure Outlook 2050 with Gasunie</b>		This joint project together with Gasunie aims to find the answers for the energy transition. A scenario where the electricity and gas energy infrastructures are seamlessly integrated is a key element of this partnership. A pilot project together with Thyssengas has been initiated in 2019 called Element Eins, which involves the construction of a power-to-gas installation of 100MW in Lower-Saxony, Germany, which is expected to come into operation gradually from 2022 onwards.
<b>Groene Netten coalition</b>		An initiative of MVO Nederland is the Groene Netten coalition. Here key infrastructure companies are working together with the aim to accelerate aspects with respect to sustainable practices, such as circularity and energy reduction. <a href="https://www.groenenetten.org/groene-netten/home/">https://www.groenenetten.org/groene-netten/home/</a>
<b>Equigy</b>		TenneT has teamed up with other TSOs in Italy and Switzerland to create a European crowd-balancing joint-venture, called Equigy. This platform uses blockchain technology to register and validate a multitude of transactions with owners of distributed energy sources. It gives TSOs visibility of the flexible capacity offered by home-storage devices and allows them to manage the transactions securely. So far, Equigy has been launched in the Netherlands, Germany, Italy, and Switzerland, but it is a platform designed to accommodate a bigger scale. The plan is for it to progressively roll out in other European countries and discussions with other TSOs and partners (manufacturers of electric appliances and aggregators) are ongoing. For more information on Equigy: <a href="http://www.equigy.com">www.equigy.com</a> .
<b>Vandebrom</b>		TenneT is working together with Vandebrom in a pilot project. to aggregate power from electric cars and household batteries. This provides flexibility, helping to balance the grid and prevent congestion.
<b>Sonnen E-services</b>		Comparable to our partnership with Vandebrom, we are performing a similar pilot with Sonnen E-services in Germany.
<b>GOPACS</b>		A partnership with the Dutch Distribution System Operators (DSOs) to launch a new smart solution to reduce congestion in the electricity grid by using flexible power from the market.
<b>De Vlinderstichting</b>		Together with 'De Vlinderstichting' we are working to take next steps with respect to our Nature ambition, aiming to improve the biodiversity near our assets.
<b>St. de Noordzee</b>		In collaboration with St. de Noordzee a positive impact of the Dutch offshore activities in the Netherlands on marine biodiversity is pursued. Stichting de Noordzee and TenneT together gather academics to open a discussion on the possibilities to improve nature and biodiversity in the North sea.
<b>Energy cooperation in the North Sea: NOGEP, NWEA, TNO, TenneT and Stichting Natuur &amp; Milieu</b>		Dutch offshore North Sea oil and gas operators, the offshore wind sector and NGO's, have joined forces and declare that they will collaborate in order to contribute to a safe, sustainable, reliable and affordable energy system in balance with improving eco-systems.



Partner	Logo	Description
<b>Green Deal Infra-nature</b>		Via the Green Deal, an instrument from the Dutch ministries to progress sustainability, we are able to: <ul style="list-style-type: none"> <li>learn from the experience of other companies</li> <li>create a relevant network with Ministries, NGO's and similar infrastructure companies.</li> <li>set up a joint lobby for biodiversity related issues. The Ministry of Economic Affairs for example, wants to look upon a solution for the regulatory issues related to biodiversity.</li> </ul>
<b>Natuur &amp; Milieu</b>		We signed a partnership agreement with Natuur & Milieu in October 2014 for 'Wind op Zee' (NL). Natuur & Milieu is coordinating the input for the EIA procedure for Wind op Zee.
<b>Cigre, workgroup corridor management</b>		Cigre is an international non-profit association for promoting collaboration with experts from all around the world by sharing knowledge and joining forces to improve electric power systems of today and tomorrow. One of the working groups focusses on biodiversity and landscape to have effective corridor management.
<b>Best Grid / Renewables Grid Initiative (RGI)</b>		Cooperation with a local NGO to analyse how to connect biotopes via power lines 2014-2015 – Partner was the Renewables Grid Initiative and NABU lower Saxony.
<b>NABU (German BirdLife), under Best Grid</b>		For the project SuedLink, TenneT is cooperating very closely with the regional branch of NABU (German BirdLife) in Lower Saxony. Since 2017, we have agreed with other TSOs and the NABU (Naturschutzbund Deutschland) to set-up a bird hot line. People who find a dead bird in the vicinity of our lines can call this line, managed by the NABU, which keeps a register. The information will be used to change the type of bird flaps we use and potentially help us design new lines that are safer for birds in the future.
<b>The European Grid Declaration on Electricity Network Development and Nature Conservation</b>		Under the RGI, a coalition of 24 organisations, including nine of Europe's largest TSOs, and NGOs such as WWF, Greenpeace, Birdlife International and Friends of the Earth Europe, work together.
<b>Secure supply, today and tomorrow</b>		
<b>Innosys 2030</b>		TenneT is working with partners to find new solutions to help shape the future energy landscape. This programme was initiated by the German government and the four German TSOs to find innovative solutions to boost grid flexibility and automation, thereby allowing existing grid networks to handle greater capacity while ensuring security of supply and preventing system failure. InnoSys aims to design future-proof electricity systems, optimised for the complexities of renewable energy in the years ahead.
<b>ENTSO-E</b>		TenneT works together with other TSOs in the European Network of Transmission System Operators for Electricity (ENTSO-E). This is a collaboration of 39 TSOs from 35 countries working together in key areas including establishing technical and market-related network codes, coordinating plans to develop European infrastructure and promoting technical cooperation between TSOs. As a member of ENTSO-E, TenneT is helping to build a more integrated European electricity market, contributing to a sustainable energy landscape, and ensuring electricity in Europe is affordable, sustainable and secure.
<b>Netbeheer Nederland</b>		TenneT is a member of Netbeheer Nederland, the association of electricity and gas grid operators in the Netherlands. Netbeheer Nederland aims to facilitate cooperation between these grid operators representing the interests of its members in conversations with other stakeholders.
<b>ENSURE</b>		TenneT is a key partner in the Kopernikus project ENSURE in which scientists, industrial companies and civil society organisations are developing the energy grid of the future. The Kopernikus projects are among the largest research initiatives in Germany in the field of the energy transition. Their aim is to make it possible for Germany to be climate neutral by 2050. Power-to-X technologies play a key role in this, as they can transform electricity into other forms of energy, for example fuels (Power-to-Fuel), gases (Power-to- Gas), and heat (Power-to-Heat).
<b>Energise our people and organisation</b>		
<b>Refugee Talent Hub</b>		To find qualified refugee talents in the Netherlands, TenneT partnered up with the Refugee Talent Hub and TENT Partnership – both initiatives linking refugee talent and employers, with paid employment as the goal. The Refugee Talent Hub and TENT Partnership provide a network, bringing affiliated employers into contact with job-seeking newcomers through small-scale, customised meet & greet meetings.
<b>TENT</b>		



Partner	Logo	Description
<b>Integrated High Voltage Laboratory with TU Delft</b>		TenneT is working together with TU Delft via the Integrated High-Voltage Laboratory at TU Delft. Through this, TenneT can gain insight into the latest knowledge and research undertaken by Masters and PhD, who are the talent of the future.
<b>Safeguard our financial health</b>		
<b>Cooperation with co-investors</b>		To finance the expansion of offshore grid connections, TenneT cooperates with external co-investors such as Copenhagen Infrastructure Partners (CIP) and Chubu Electric Power. Via separate legal entities the co-investors contribute equity and receive economic participation rights in return. Their contribution helps to ensure adequate financial ratios. Furthermore their participation strengthens TenneT's interest in a reliable and stable regulatory framework as reasonable co-investors interests are communicated towards policy makers and regulators.
<b>Cooperation related to our Revolving Credit Facility</b>		ABN AMRO, BNG, BNP Paribas, Commerzbank, Deutsche Bank, HSBC, ING, Rabobank, NatWest, Santander, UniCredit and SMBC are participating in our current sustainable Revolving Credit Facility (RCF) of EUR 3.3 billion. The majority of these house banks also participated in TenneT's 2009 RCF, showing our commitment to long-term relationships.



## Appendix

### Adjusted 2020

Scope 1				Conversion factor		emission in ton CO <sub>2</sub> e	net emissions in ton CO <sub>2</sub>
<b>Lease</b>							
14,049,895	km	DE	0.000145	ton CO <sub>2</sub> /km		2,037	2,037
12,758,727	km	NL	0.000145	ton CO <sub>2</sub> /km		1,850	1,850
<b>Total Lease</b>						<b>3,887</b>	<b>3,887</b>
<b>Gas use offices</b>							
7.17	GWh	DE	183	tonnes CO <sub>2</sub> e/GWh		1,312	1,312
133,934.50	m <sup>3</sup>	NL	0.001788	ton CO <sub>2</sub> e/m <sup>3</sup>		239	-
<b>Total energy use office</b>						<b>1,551</b>	<b>1,312</b>
<b>SF6 leakage</b>							
102.11	kg	DE	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>		2,400	2,400
994.86	kg	NL	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>		23,379	23,379
<b>Total SF6 leakage</b>						<b>25,779</b>	<b>25,779</b>
<b>Total Scope 1</b>						<b>31,217</b>	<b>30,978</b>
<b>Scope 2</b>							
<b>Electricity use offices</b>							
4.35	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh		1,592	-
6.35	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh		2,883	-
<b>Total Electricity use offices</b>						<b>4,475</b>	-
<b>Grid losses</b>							
4,208.00	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh		1,540,128	693,058
1,321.69	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh		600,047	-
<b>Total grid losses</b>						<b>2,140,175</b>	<b>693,058</b>
<b>Electricity use stations</b>							
197	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh		72,102	-
20	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh		8,978	-
<b>Total Electricity use stations</b>						<b>81,080</b>	-
<b>Total Scope 2</b>						<b>2,225,730</b>	<b>693,058</b>
<b>Scope 3</b>							
<b>Business and commute</b>							
14,475,000	km	DE	0.000163	ton CO <sub>2</sub> /km		2,359	2,359
8,194,361	km	NL	0.000145	ton CO <sub>2</sub> /km		1,188	1,188
<b>Total business and commute</b>						<b>3,547</b>	<b>3,547</b>
<b>Air travel</b>							
703,396	km	DE	0.000202	ton CO <sub>2</sub> /km		142	142
2,502,177	km	NL	0.000202	ton CO <sub>2</sub> /km		505	505
<b>Total air travel</b>						<b>647</b>	<b>647</b>
<b>Train</b>							
1,385,011	km	DE	0.000002	ton CO <sub>2</sub> /km		3	3
823,779	km	NL	0.000002	ton CO <sub>2</sub> /km		2	2
<b>Total Train</b>						<b>5</b>	<b>5</b>
<b>Offshore transport</b>							
<b>Helicopters</b>							
613,983	l	DE	0.00354	ton CO <sub>2</sub> /l		2,173	2,173
<b>Supply vessels</b>							
1,717,250	l	DE	0.002719	ton CO <sub>2</sub> /l		4,669	4,669
<b>Total offshore transport</b>						<b>6,842</b>	<b>6,842</b>
<b>Total Scope 3</b>						<b>11,041</b>	<b>11,041</b>
<b>Total</b>						<b>2,267,988</b>	<b>735,077</b>
						ton CO <sub>2</sub> e	ton CO <sub>2</sub> e



Adjusted 2019

Scope 1		Conversion factor		emission in ton CO <sub>2</sub> e		net emissions in ton CO <sub>2</sub>	
<b>Lease</b>							
16,979,007	km	DE	0.000145	ton CO <sub>2</sub> /km	2,462	2,462	
-	km	NL	0.000145	ton CO <sub>2</sub> /km	2,761	2,761	
<b>Total Lease</b>					<b>5,223</b>	<b>5,223</b>	
<b>Gas use offices</b>							
6.30	GWh	DE	183	tonnes CO <sub>2</sub> e/GWh	1,153	1,153	
133,934.50	m <sup>3</sup>	NL	0.001788	ton CO <sub>2</sub> e/m <sup>3</sup>	239	-	
<b>Total energy use office</b>					<b>1,392</b>	<b>1,153</b>	
<b>SF6 leakage</b>							
117.00	kg	DE	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>	2,750	2,750	
862.00	kg	NL	23.5	ton CO <sub>2</sub> e/kg SF <sub>6</sub>	20,257	20,257	
<b>Total SF6 leakage</b>					<b>23,007</b>	<b>23,007</b>	
<b>Total Scope 1</b>					<b>29,622</b>	<b>29,383</b>	
<b>Scope 2</b>							
<b>Electricity use offices</b>							
4.61	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	1,687	1,687	
6.35	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	2,883	-	
<b>Total Electricity use offices</b>					<b>4,570</b>	<b>1,687</b>	
<b>Grid losses</b>							
3,785.00	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	1,385,310	887,413	
1,249.80	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	567,409	-	
<b>Total grid losses</b>					<b>1,952,719</b>	<b>887,413</b>	
<b>Electricity use stations</b>							
178	GWh	DE	366	tonnes CO <sub>2</sub> e/GWh	65,148		
20	GWh	NL	454	tonnes CO <sub>2</sub> e/GWh	9,080	-	
<b>Total Electricity use stations</b>					<b>74,228</b>	-	
<b>Total Scope 2</b>					<b>2,031,517</b>	<b>889,100</b>	
<b>Scope 3</b>							
<b>Business and commute</b>							
12,620,000	km	DE	0.000163	ton CO <sub>2</sub> /km	2,057	2,057	
15,966,137	km	NL	0.000145	ton CO <sub>2</sub> /km	2,315	2,315	
<b>Total business and commute</b>					<b>4,372</b>	<b>4,372</b>	
<b>Air travel</b>							
4,246,915	km	DE	0.000202	ton CO <sub>2</sub> /km	858	858	
5,624,332	km	NL	0.000202	ton CO <sub>2</sub> /km	1,136	1,136	
<b>Total air travel</b>					<b>1,994</b>	<b>1,994</b>	
<b>Train</b>							
4,915,334	km	DE	0.000002	ton CO <sub>2</sub> /km	10	10	
2,419,233	km	NL	0.000002	ton CO <sub>2</sub> /km	5	5	
<b>Total Train</b>					<b>15</b>	<b>15</b>	
<b>Offshore transport</b>							
<b>Helicopters</b>							
447,496	l	DE	0.00354	ton CO <sub>2</sub> /l	1,584	1,584	
<b>Supply vessels</b>							
1,083,800	l	OFS	0.002719	ton CO <sub>2</sub> /l	2,947	2,947	
<b>Total offshore transport</b>					<b>4,531</b>	<b>4,531</b>	
<b>Total Scope 3</b>					<b>10,912</b>	<b>10,912</b>	
<b>Total</b>					<b>2,072,051</b>	<b>929,395</b>	
					ton CO <sub>2</sub> e	ton CO <sub>2</sub> e	