

Transition together

Annual Report 2019




STEDIN GROEP

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Annual summary for 2019

1st quarter

27 January – A gas explosion at Jan van der Heijdenstraat in The Hague caused the front of a building to collapse and seriously damaged several homes. The explosion was caused by a crack in a gas main.

29 January – GOPACS platform launched. This initiative by the combined regional grid managers as well as TenneT is aimed at achieving a better balance between electricity supply and demand so as to prevent grid overload.

4 March – Drinking water company Vitens and Stedin sign a covenant. Combining activities underground results in less disruption for customers and leads to cost savings.

13 March – Joulz is sold to 3i Infrastructure, a powerful new owner. Job security of the roughly 150 employees is guaranteed.

2nd quarter

3 May – The grid managers launch the 'Dig Safe' ['Veilig graven'] campaign aimed at preventing power outages and unsafe situations during garden maintenance.

20 June – NetVerder is a new name in Stedin Group. It covers the activities focusing on energy infrastructures apart from natural gas and electricity. In July, NetVerder is teaming up with housing associations and the municipality of Delft to install a heating network in the city.

25 June – Rozenburg, in the province of South Holland, becomes the first place in the Netherlands to see existing homes heated using pure hydrogen.

28 June – The Climate Agreement presented by the government receives unanimous support from the grid managers in the Netherlands. They endorse the aim of the Agreement and are concerned about the practical challenges that it involves, especially in view of the problems concerning a shortage of grid capacity.

3rd quarter

10 July – Richard Moti, Rotterdam city councillor with responsibility for work and income, presented the 1,500th senior secondary vocation diploma (MBO) to the graduating classes of Stedin's in-house training school. A group of 169 students were awarded an MBO diploma. They are now working as fitters, helping to realise the energy transition in Rotterdam and surrounding area.

5 September – Stedin and research institute Kiwa examined how the gas network serving Stad aan 't Haringvliet can gradually switch from natural gas to green hydrogen, which is then used to heat the 600 homes in the village. Stedin's existing gas network can be used for this purpose, eliminating the need to install a new network.

10 September – Zeeland becomes the first province to develop a Regional Energy Strategy (RES), ahead of any other region. The process enabling the strategy to be developed has been lauded. The grid managers (including Enduris) and the many stakeholders contributed through a series of sector platforms.

16 September – In the Hoog Dalem district of Gorinchem, several homes have been fitted with smart equipment that is actively regulated according to the energy generated by the homes and their energy usage. The aim is for the combined homes to regulate their consumption of the locally generated energy by exchanging it as and when needed.

30 September – The 10,000th connection for a gas-free new-build home was requested in September. In the third quarter, a total of 92% of all newly built homes in Stedin's service area were gas-free. As the same figure in the second quarter was 79%, it is a new record.

4th quarter

10 October – Increasing the capacity of the electricity grid in the Port of Rotterdam can be done more efficiently and cheaply. This outcome emerged from a study by the Port of Rotterdam Authority, Stedin and TenneT into the implications of the energy transition. Demand for (green) energy from the industry in Rotterdam is set to increase significantly in the coming decades.

14 October – Minister of Social Affairs and Employment Wouter Koolmees paid a visit to Stedin's in-house training school. He was shown around by CEO Marc van der Linden. The Minister sat in on a class being given to residence permit holders who are being trained by Stedin and discussed Stedin's plans for Lifelong Learning. He also tested his technical skills in the switching centre.

18 October – All local authorities must have adopted a Transition Vision for Heat by the end of 2021. This vision sets out alternatives for gas-free heating and cooking within each district in the local authority's area. An information package helps local authorities to plan for these gas-free districts.

25 October – Demand for charging points for electric cars is set to double in the coming years. In Utrecht, The Hague and Rotterdam, Stedin is working with the municipal authorities and the charging station operators to develop an efficient 'single operating routine' working method. This method ensures that charging stations are installed quickly and at a lower cost.

6 November – Stichting Zeeuwse Publieke Belangen (Zeeland Public Interest Foundation) provides financial support to the GreenPort Brouwershaven project. This port will be the first harbour in Zeeland where electric ships can charge their batteries with sustainable energy.

11 November – Stedin Group issues its first green bond. The 500 million euros raised are linked to investments made by Stedin Group in sustainable projects. The green bond issue fits well into Stedin Group's strategy of making a contribution to creating a more sustainable society.

21 November – Stedin and other regional grid managers provide details of the mapping of their electricity grids as open data on their websites. This provision facilitates decision-making on the construction of solar farms or new-build areas, for instance, and allows parties to move more quickly in the project orientation phase.

2 December – Current affairs programme Nieuwsuur broadcasts an item on why the costs of managing the electricity grid will continue to rise in the future. Stedin CEO Marc van der Linden joins the programme on behalf of Netbeheer Nederland and explains that the energy transition costs money: 'It is a political choice as to how we want to divide these costs.'

Transition together

This annual report highlights Stedin's customers, stakeholders and staff, who are transitioning together towards a sustainable energy supply. You can see the following people on the cover page from top left to bottom right:

- Eelke Kraaijeveld, Gorinchem city councillor with responsibility for the energy transition, among other things
- Lennard Seriese, Energy Transition Senior Account Manager at Stedin Netbeheer
- Tom Meewisse, Director of Meewisse Roses
- Jacqueline Fernandes-van Lit, Account Manager at Stedin Netbeheer
- Ans Groenewegen, Strategic Environmental Manager at Dunea Duin & Water
- Mustafa Karapinar, Smart Meter Fitter at Stedin Netbeheer
- Henk van den Berg, HoekscheWaardDuurzaam cooperative
- Gijs Lambooij, Strategic Environmental Manager at Stedin Netbeheer
- Daan Verbaan, Energy Supply Systems Specialist at ProRail
- Gino de Windt, Account Manager at Stedin Netbeheer

The executive board of Stedin Group. From left to right: Marc van der Linden, David Peters, Danny Benima, Judith Koole

Foreword

2019 was a year of transitioning together at Stedin Group. Shifting between the interests of different stakeholders, smart switching from the role of operator to that of partner in the energy transition, from gas to new sources of thermal energy and from technology as our starting point to the customer/partner as our guiding principle. There was also a tension between investing in the energy transition and ensuring our continued financial health. Where a failure occurred, we were flexible enough to take whatever action was necessary to achieve the desired situation.

Concerted action stands for change, for listening to our customers and environment, as well as for our capacity of adapting to the needs and wishes of parties in our environment. We prefer to do so in coordination with our customers, partners and other stakeholders. The annual report discusses all these developments. We talk about how we have reinforced our role in the energy transition, the positive impact that Stedin has on society and the negative impact that we want to limit.

In 2019, we made progress on increasing the tangible substance of our mission, vision and strategy. A leading example is the sale of Joulz to British investment company 3i Infrastructure in May. This sale is in line with our strategy of focusing on our core tasks and was also in keeping with our goal of remaining financially healthy. The sale enabled us to strengthen our balance sheet. While the jobs of 150 employees have been secured, Joulz now has a robust and powerful owner.

2019 also saw a further increase in efficiency and customer focus. Business pragmatism in the organisation is increasing in the positive sense of the word: we manage for results and endeavour to improve our performance. We are doing more and better work with fewer people. The integration with DNWG is progressing well and we are intensifying our cooperation with water companies. Coordinating our activities with water companies means that we only need to dig once and allows us to save costs.

The Climate Agreement was also signed this year. With increased sustainable energy generation already having consequences for the energy grid, grid managers had measures included in the Agreement which enable them to anticipate developments. Grid managers want to be capable of reinforcing and increasing the capacity of the electricity grid in good time as well as making smarter use of the existing grid. There is a lot of work still to do and we will need to invest substantially in the coming years to achieve our goals, while we face reduced revenue growth at the same time. In addition, a raft of issues still need to be clarified, particularly in the field of laws and regulations. Despite the challenges, we are doing everything possible to facilitate the energy transition.

The low point of the year for Stedin was the gas explosion in The Hague. The shock of that Sunday in January continues to resonate among many people. At such a times, though, Stedin's strength also comes to the fore. We are often invisible as a company, which is how it should be. In a crisis situation, however, everyone is ready and willing to help – whatever the time of day.

All these examples point to coordinated, concerted action. We believe in working together. In fact, we are convinced that we can only meet the task which we face through concerted effort, together with our customers, our shareholders, our partners and of course our employees.

Climate change will remain a major driver for the energy transition, and Stedin's role in it, over 2020. We are embracing technical and innovative possibilities, and focusing on our customers. While it will be demanding for all of us to implement the major changes, we are convinced that it can be done. The main thing is that we do so together.

Board of Management

Marc van der Linden
Danny Benima
Judith Koole
David Peters

At the time of publication of this 2019 Annual Report, far-reaching measures are taken in the fight against the coronavirus.

The energy infrastructure is vital to our society. In this situation, too, we are taking all necessary measures to ensure our electricity and gas grid remains as reliable as ever. You can read more about the impact of the corona crisis in the chapter Subsequent events.

About us

Profile

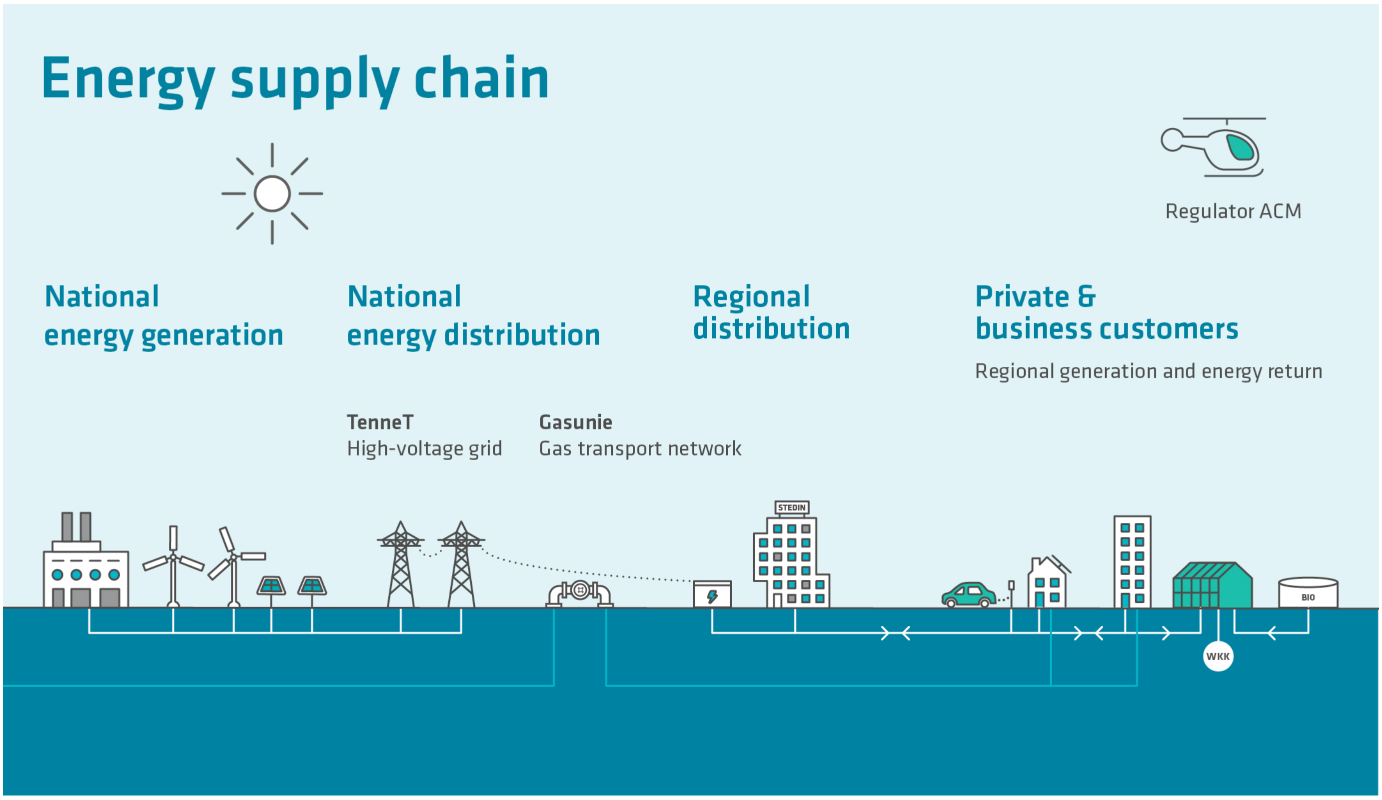
More than 2.2 million private and business customers rely on Stedin Group for their energy supply, day and night. We are proud that our grids are among the most reliable and cost efficient in the world.

Stedin Group in the energy supply chain
The electricity and gas grids are a key link in the energy system. The grid operators within Stedin Group, Stedin and Enduris, are responsible for the regional distribution of electricity and gas. We work with other parties forming part of the energy supply chain: the producers of gas and electricity, TenneT and Gasunie with their responsibility for the national distribution of electricity and gas, our suppliers, the other regional grid managers, and the organisations which monitor the reliability, affordability, safety and sustainability of our energy supply.

Our customers are also increasingly generating sustainable energy themselves, which they return to our electricity network. As a result, we are all part of a far-reaching societal shift to a clean economy based on renewable sources.

Stedin Group operates and has its registered office in the Netherlands. We carry out regulated activities as a grid manager and we also perform a number of non-regulated activities as a group. Our head office is located at Blaak 8, 3011 TA in Rotterdam.

Service area
We manage and maintain the energy grids in a large part of the Randstad conurbation as well as the provinces of Utrecht and Zeeland. Our service area is home to roughly 5.5 million people and covers three of the four largest cities in the Netherlands, the Port of Rotterdam and the Port of Zeeland, as well as large industrial and glasshouse horticulture regions. Parts of the provinces of North Holland and Friesland also fall within this area.



Stedin Group's activities

Stedin Group focuses on all activities relating to constructing, managing and maintaining energy grids. We also facilitate the energy market.

Grid management

Stedin and Enduris are the independent grid managers within Stedin Group. They operate alongside five other regional grid managers in a regulated market. Each regional grid manager is a monopolist in its area of operations. Regulation means that the work performed by grid managers is provided for in Dutch law and that the rates which they may charge for this work are set by the Netherlands Authority for Consumers and Markets (ACM). The regulation model encourages grid managers to achieve maximum performance in terms of efficiency and quality by using a benchmark comparison.

Stedin

As a grid manager, Stedin ensures a safe, reliable and affordable energy supply for its more than 2 million customers. Stedin has 3,672 employees (male: 3,050; female: 622).

Enduris

Within DNWG Group, grid manager Enduris manages the energy network for around 200,000 households and businesses in the province of Zeeland. DNWG Group (Enduris plus DNWG Infra) has a total workforce of 669 (male: 548; female: 121). DNWG Group will remain a separate part of Stedin Group until the end of 2021, at which point it will be integrated into Stedin Group.

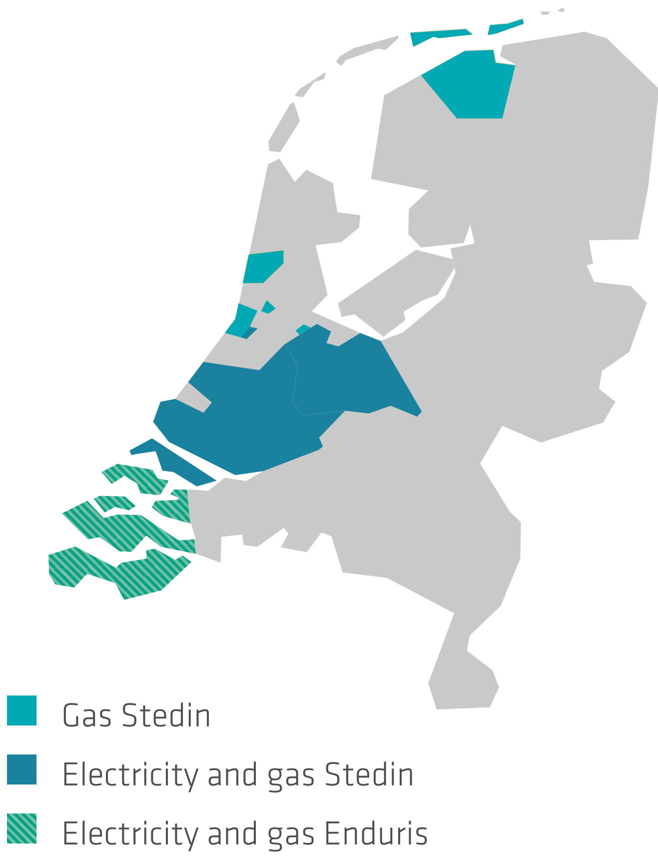
Facilitating the energy market

Facilitating the energy market is part of our societal role as a grid manager. Among other things, this fact means that our electricity and gas grids should be accessible under identical terms and conditions to all energy suppliers. Consumers are free in their choice of energy supplier. The resulting competition guarantees very competitive energy prices, which benefits consumers. In addition, the grid managers make switching to another energy supplier very simple and they ensure that measurement data are exchanged so the supplier can prepare an accurate energy bill. We also enable returning sustainable electricity to the electricity network.

Transition together

Cooperation between grid managers: C-ARM

C-ARM is the platform that allows us to gather and combine the measurement data from all the regional grid managers in the Netherlands. From this central platform, we can make such measurement data available to market parties, including energy suppliers and parties responsible for metering. The aim is enhanced customer ease and convenience for the market parties due to the uniform and transparent way in which all the grid managers operate. The transition is a complex process, which began in 2015. In 2019, Enexis became the first grid manager that switched to the platform. We followed on the last day of the year. Liander and several smaller grid managers will join in the course of 2020. C-ARM is an important step towards achieving our ambition: that market parties should experience us virtually at the national level as a single grid manager.



Non-regulated activities

Review of the portfolio

Our focus is on good grid management and excellent service, which is why we are cautious about non-regulated activities. We only perform these activities if:

- the activity demonstrably adds value for efficient grid management;
- there is a gap in the market;
- Stedin Group is uniquely positioned for this activity.

The economic attractiveness and feasibility of an activity as well as its priority over other activities will determine whether we will include or retain it in our portfolio. Stedin Group evaluated its non-regulated activities in 2018, which resulted in a reorganisation of the portfolio. The acquisition of Joulz Diensten by the British investment company 3i Infrastructure in 2019 followed from this evaluation. You can read more about this matter in the section on Non-regulated activities.

The non-regulated activities account for 5.1% of revenue.

NetVerder

By law, regulated activities for gas and electricity may not be carried out under the same banner as other energy infrastructures (such as steam, biogas, CO_2 and heat). These activities were consequently transferred in 2019 to a separate brand within Stedin Group: NetVerder. NetVerder promotesthe energy transition by supporting the development, construction and maintenance of energy infrastructures for heat, steam as well as biogas. NetVerder also focuses on the independent transport and distribution of other new energy sources or carriers. NetVerder is an independent part of Stedin Group. NetVerder has 5 employees (male: 5; female: 0).

DNWG Infra

Within DNWG Group, DNWG Infra is the service provider that builds and maintains the electricity and gas grids in the Province of Zeeland, on behalf of Enduris. In addition, DNWG Infra maintains and manages the grids entrusted to it by other grid managers (e.g. Evides Waterbedrijf, Stedin and TenneT) and by industrial customers. DNWG Infra also supplies services in the area of metering technology in Zeeland and elsewhere, and is an approved party responsible for metering.

Joint ventures

We form joint ventures with other parties for specific activities.

Utility Connect

Commissioned by Stedin Group and network group Alliander, Utility Connect B.V. operates a CDMA telecommunications network, which is used to read out measurement data provided by smart meters and to communicate with smart grid applications. This network allows us to shorten or prevent energy supply disruptions.

TensZ

TensZ B.V. is the joint organisation of TenneT and Stedin for managing and maintaining high-voltage grids. Each party holds a 50% share.

TeslaN

TeslaN B.V. is the joint service provider for the management and maintenance of the high-voltage grids of TenneT and Enduris. Each party holds a 50% share.

ZEBRA

ZEBRA Gasnetwerk B.V. manages and operates a high-pressure gas transport pipeline. This pipeline is used to transport high-calorific gas that is taken in from the gas transport network of Fluxys in the import station in Sas van Gent. The gas is transported to connected high-volume consumers. Enduris has an interest of one third in ZEBRA Gasnetwerk B.V. and Enexis Netbeheer has an interest of two thirds.

On 19 December 2019, an asset sale and purchase agreement was signed between Enduris BV, Enexis Netbeheer BV, Zebra Activa BV, Entrade Pipe BV and Gasunie Transport Services BV. Among other things, the agreement provides for the sale of the assets of the extra high-pressure gas grids, i.e. the 'Midden Zeeland gas grid' and the 'Zebra gas grid' owned (indirectly in part) by Enduris, to Gasunie Transport Services BV. The transaction will take place on 31 December 2020.

Terminology

'We', 'the company', 'Stedin Group' or similar terms or expressions are used in this report to refer to Stedin Holding N.V. and its subsidiaries (including Stedin Netbeheer B.V., NetVerder B.V. and DNWG Groep N.V.). The term 'Stedin' refers to Stedin Netbeheer B.V. and its subsidiaries. 'DNWG' or 'DNWG Group' refers to DNWG Groep N.V. and its subsidiaries, including Enduris B.V. and DNWG Infra B.V.

Stichting Zeeuwse Publieke Belangen (Zeeland Public Interest Foundation)

Stichting Zeeuwse Publieke Belangen is a unique alliance between the province of Zeeland, the municipalities of Zeeland and Stedin Group. The foundation was established to safeguard the arrangements concerning the sale of DNWG/Enduris to Stedin Groupin areas including employment, energy supply and the energy transition. The foundation makes a budget available to promote the energy transition in Zeeland. An overview of the initiatives can be found on the Foundation's website.

Alliances and associations

Among other parties, Stedin has entered into alliances and associations with the following: Universal Smart Energy Framework (USEF), Energy Web Foundation (EWF), Energie Data Services Nederland (EDSN), Natuur en Milieu, Platform Groene Netten, Hier opgewekt, Dutch Power, ElaadNL and Missie H2, as well as water companies Dunea and Evides.

> ‘Eelke Kraaijeveld, Gorinchem city councillor: The availability of infrastructure is vital to achieving our sustainable ambitions as a region. Stedin's contribution allows us to design solid plans, link up opportunities and help shape a sustainable future.’

Gorinchem city councillor Eelke Kraaijeveld (on the right) with responsibility for the energy transition, among other things, joins forces with Energy Transition Senior Account Manager Lennard Seriese.

Key figures and ratios for 2019

Improved grid management

2019 | 2018

Investments
In millions of euros
€ 646
€ 607

Average downtime
Electricity (in minutes)
20 | 17
Gas (in seconds)
87 | 69

Customer satisfaction
Customers who give an 8 or higher
71% | 69%

Supply reliability
(in %)
99.9962
99.9968

Facilitating the energy transition

2019 | 2018

Connections for charging stations
Electric driving (growth)
4,961 | 1,238
Fast chargers (growth)
91 | 82

Smart meter
Number of offers
317,987
377,906
Smart meters installed (%)
81.9 | 80.6

Number of new-build homes natural gas-free
80%
56%

Growth capacity of solar panels
Change from 2018 in provinces of Utrecht and Zuid-Holland
53% | 49%

Sustainable business operations

2019 | 2018

Safety LTIR
Number of lost-time injuries with absenteeism per million hours worked.
2.19 | 3.00

Safety RIF
Number of recordable incidents per 200,000 hours worked
1.00 | 1.00

Employee satisfaction
On a scale from 1 to 10
Engagement
7.5 | 7.5
Commitment
7.8 | 7.8

CO_2-emmissions
Generated by internal business operations in tonnes
13,344
15,352

Financial results

2019 | 2018

Total net revenue and other income
In millions of euros
€ 1,234
€1,286

Balance sheet total
In millions of euros
€ 7,289
€ 6,991

Solvency
44.9%
43.3%

Stedin Group's ratios

	Unit	2019	2018	2017
Financial figures				
Net revenue and other income	€ million	1,234	1,286	1,194
Investments in property, plant and equipment	€ million	646	607	494
Balance sheet total	€ million	7,289	6,991	6,551
Result after income tax	€ million	325	118	423
Solvency	%	44.9	43.3	43.3
Operational ratio's				
High-use electricity connections	number	18,912*	22,692	21,786
Low-use electricity connections	number	2,283,563	2,263,009	2,256,608
Quantity of electricity transported	GWh	19,957	21,330	21,893
Length of electricity cables	km	56,140	55,604	55,191
Length of electricity cables laid	km	1,034	806	611
High-use gas connections	number	9,633*	10,761	10,852
Low-use gas connections	number	2,111,038	2,104,174	2,108,397
Quantity of gas distributed	million m^3	4,651	4,852	4,865
Length of gas pipelines	km	28,216	28,190	28,137
Length of gas pipelines laid	km	221	250	210
Medium-voltage failures resulting in disruption	number	519	433	390
Personnel				
Employees (internal) at year-end	number	4,346	4,470	4,488
Employees (external) at year-end	number	804	1,059	1,004
FTEs (internal) at year-end	number	4,213	4,339	4,365
FTEs (external) at year-end	number	700	791	750
Absence through sickness	%	4.8**	5.0	5.2
Male employees	%	83	83	83
Female employees	%	17	17	17
Safety				
Lost Time Injury Rate (LTIR)	ratio	2.19	3.00	4.88
Recordable Incident Frequency (RIF)	ratio	1.00	1.00	1.29
Outages and interruptions in electricity supply				
Average duration of interruption MV/LV (CAIDI)	minutes	82	76	88
Interruption frequency MV/LV (SAIFI)	number	0.245	0.223	0.188
Annual average downtime MV/LV (SAIDI)	minutes	20	17	16
Annual average downtime HV/MV/LV (SAIDI)	minutes	21.0	18.3	16.6
Outages and interruptions in gas supply				
Average duration of interruption (CAIDI)	minutes	270	122	78
Interruption frequency (SAIFI)	number	0.005	0.0094	0.0086
Annual average downtime (SAIDI)	seconds	87	69	40

* Decrease due to sales Joulz Diensten
** % absence 12 months

	2019	2018	2017
Information on total number of employees			
Number of employees of Stedin Group	4,346	4,470	4,488
Number of employees at Stedin	3,672	3,665	3,185
Number of employees at NetVerder	5	-	-
Number of employees at Joulz Diensten	-	153	-
Number of employees at Joulz (incl. Joulz Diensten)	-	-	648
Number of employees at DNWG	669	652	655
Number of employees on a full-time contract			
Male employees	3,403	3,517	3,539
Female employees	357	385	396
Number of employees on a part-time contract			
Male employees	200	184	173
Female employees	386	384	380
Number of employees on a permanent contract			
Male employees	3,402	3,457	3,425
Female employees	679	701	669
Number of employees on a temporary contract			
Male employees	201	244	287
Female employees	64	68	107
CLA/Non-CLA			
CLA	4,158	4,282	4,268
Non-CLA	188	188	220
Diversity of boards and employees			
Younger than 25	66 (2%)	59 (1%)	59 (1%)
Between 25 and 34	843 (19%)	872 (20%)	933 (21%)
Between 35 and 44	1.056 (24%)	1.060 (24%)	1.000 (22%)
Between 45 and 54	923 (21%)	1.005 (22%)	1.058 (24%)
55 and older	1.458 (34%)	1.474 (33%)	1.438 (32%)
Number of women in management positions	60	64	58
Number of men in management positions	224	231	235

‘As a grid manager, we are an essential link to a sustainable energy supply.’

Strategy

As a grid manager, we are an essential link to a sustainable energy supply. We are switching to clean energy from renewable sources, which requires major adjustments in the energy system. Stedin cannot do so alone: transitioning together with customers and external parties will enable us to achieve this aim.

Mission, vision and strategy

Working together to create an environment filled with new energy. That is our mission. Together, we are working to ensure a sustainable energy supply for today and tomorrow. We believe that we can make the energy transition possible by focusing on our core tasks for (future) grid management and delivering an excellent service for our customers. We have identified three strategic spearheads: improved grid management, facilitating the energy transition and sustainable business operations.

We are working day and night on a future-proof grid. We are investing in the infrastructure that is needed to connect solar and wind farms as well as to transmit the electricity that is generated; to heat districts when they switch to a heat grid or a heat supply with hybrid heat pumps in combination with sustainable gases, or when they go fully electric with heat pumps; and to enable the increasing numbers of electric cars to charge or discharge their batteries. We are investing in smarter technology for our electricity grid to give us greater insight into the energy flowing through the grid and to help us rectify faults more quickly. This insight also improves our capacity to predict and manage, so the voltage quality is maintained. Smarter also means using the existing infrastructure differently; for instance, by using the gas grids for sustainable gases such as hydrogen. This process will help to ensure that the transition remains affordable.

Strategic challenges

Workload is increasing, technical staff is scarce

The changes are creating a different focus among our range of activities and our workload is increasing. Not only is the number of new connections and grid reinforcements rising, we also need to take account of and anticipate various scenarios as well as the impact of changes on our grids. Grid managers have a greater role to play in making data accessible and there is heightened demand for substantial input from Stedin in discussions on energy policy.

We invested substantial sums in our Strategic Personnel Plan this year. Within this plan, we developed a series of future scenarios to obtain a better understanding of developments in the nature and scope of work. These scenarios help us to prepare in good time. In this way, our in-house training school is able to provide timely training or retraining for staff. Our labour market campaign further develops our reputation as an appealing employer, so we can continue to attract people with the right skills and talents.

Quality of services

Customers have freedom of choice in their sustainable energy supply, which complicates the picture. Anyone wanting to construct new facilities or set up a connection is free to do so, even if the available capacity of the grid is limited at that spot. It is essential to look and plan ahead together in order to ensure that sufficient grid capacity remains available. Planning for solar farms is currently the most pressing challenge. The pace of solar farm construction outstrips the rate at which grid capacity can be increased, a process that can often take several years, since the grid manager has to go through licensing procedures as well as build and connect new infrastructure (e.g. stations). It is therefore essential that grid managers are informed in good time about any new solar farms that are planned, which requires greater coordination and guidance by the authorities. For this reason, we engage with customers as well as local and regional parties, looking ahead together. We are actively involved in the Regional Energy Strategies (RES) within the areas that we serve and provide an analysis of the impact on grid infrastructure for each RES.

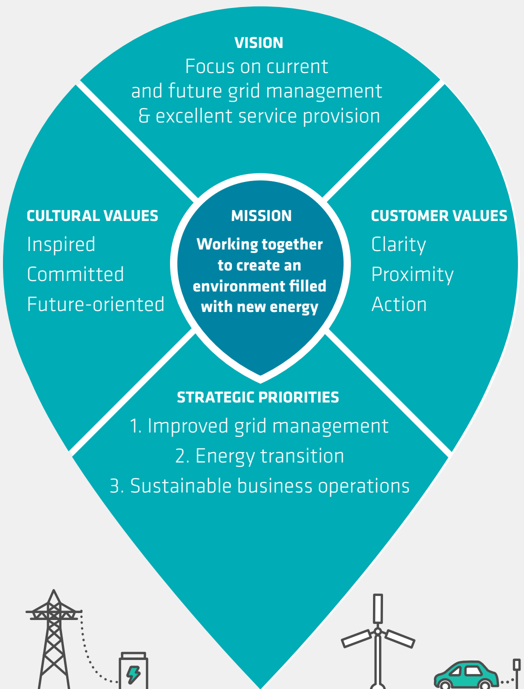
Cooperation with partners in the energy supply chain and a multi-disciplinary way of working are also good ways of utilising our resources more efficiently. Furthermore, this process leads to improved services; a street only needs to be dug up once, for example, preventing additional inconvenience. Among other parties, we work with water companies in this approach. This collaboration enables us to save millions upfront by simply coordinating our work to ensure that we carry it out at the same time and at the same place. There is still a great deal of potential in further avoiding replicating activities.

Financially healthy

We are increasing our investments in order to fulfil our role in the energy transition and ensure the ongoing reliability of our energy grid. At the same time, we are keen on keeping customers' energy bills affordable and on being capable as an organisation of continuing to finance these investments, which presents a challenge. The emphasis is therefore on efficient working practices and saving costs. We are making significant advances in this regard. Stedin Group has already implemented a variety of different measures. In 2018, a five-year efficiency programme was launched with the aim of reducing operating expenses by approximately 150 million euros. Savings of roughly 60 million euros had already been achieved by the end of 2019. In addition to substantial savings in our operating expenses, a comprehensive review of our investments was also undertaken. Stedin imposed an additional savings target of 125 million euros for this purpose, which represents the maximum feasible level of internal measures achievable by Stedin Group. We are also in dialogue with our shareholders about our long-term financing.

Working together to create an environment filled with new energy

More than 2.2 million customers rely on us. Day and night. Because energy is indispensable in the world in which we live. The energy transition will require major adjustments to the energy grid, or rather our energy system. New technologies can help, as can good collaboration between all the people and organisations involved in our energy supply. If we really roll up our sleeves together with a lot of energy, we will succeed. The availability of energy in our environment will then be just as much a matter of course in future as it is today.



Our three strategic priorities

We are working vigorously on improved grid management by continually improving our performance on our core tasks.

- Reliable grids
- Affordable and efficient services
- High-quality products and services

We intend to facilitate the energy transition through innovation and by collaborating closely with partners.

- Future-proof grids
- Making grid information available
- Accelerating through cooperation

As ambassadors for the energy transition, we are aiming for sustainable business operations:

- Safe working conditions
- Professionally competent employees now and in the future
- Positive environmental impact (One Planet)
- Financial health

Developments within society and the energy market

Various developments affect Stedin Group. We describe the principal influences and trends that play a part in our strategic choices and business operations.

Climate Agreement signed

The Netherlands signed the Climate Agreement this year. Through the Climate Agreement, we are seeking to implement the international goal of limiting global warming to below 2 degrees. For the Netherlands, the 2-degrees goal means that emissions of greenhouse gases must have been reduced by at least 49% by 2030 compared with 1990. Together with the other grid managers, Stedin also signed the Climate Agreement. In doing so, we officially signalled our commitment to joining many other companies and public authorities within the Netherlands in switching to sustainable energy.

With increased sustainable energy generation already having consequences for the energy grid, grid managers had measures included in the Agreement which enable them to anticipate developments quickly. Grid managers want to be capable of reinforcing and increasing the capacity of the electricity grid in good time as well as making smarter use of the existing grid. Stedin has high hopes of the agreements on the district-oriented approach in the built environment, since it increases the manageability and predictability of the activities as well as the necessary materials.

Energy legislation

The gathering momentum of the energy transition in the Netherlands has brought a number of bottlenecks to light. Several times in 2019, grid managers had difficulties in connecting a large number of solar farms within the legally prescribed term. It is becoming increasingly clear that current energy legislation is not sufficiently adapted to this new phase in the energy transition. At present, energy legislation does not make sufficient provision for new roles and tasks in the energy system of the future. In addition, current energy legislation offers little scope for investing proactively in a future-proof energy infrastructure for the industry. Without proactive investments in a sustainable energy infrastructure, efforts to make the industry more sustainable will fail. In addition, the process of adopting this new legislation needs to be accelerated. The energy transition has reached a critical phase and it is regrettable if it were to be hampered by unresponsive legislation.

Market regulation of heat grids

Collective heating supply (heat grid) has become established as a key element of the energy transition in recent years. In the service area of Stedin especially, large-scale heat grids are a realistic vision for the future. Stedin foresees an increasing convergence of vital infrastructures in the longer term, which makes the construction and management of heat grids logical tasks for a network group as well. A public party such as Stedin Group is often a logical party for municipalities and provinces, given its considerable experience with infrastructures and comparable public interests. As a trusted party with this experience and background, we can add value in scaling up heat grids. Our financial return requirements, which are generally lower than those of commercial parties, contribute to a reasonable level of social cost. We also ensure that a project contribution from public funds remains in the public domain.

Heat grids are primarily provided for in the Heating Supply Act (Warmtewet). A potential role for grid operators is still under discussion in the national debate on scaling up the heat supply.

A combination of the new Heating Supply Act and EU regulations would seem to render a role for grid operators in heat virtually impossible. Grid operators would effectively be excluded at a time when multiple local authorities are actually calling for the grid operators to play a far greater role. Stedin Group would also like to play a role in heat as a key element of the energy transition. This desire prompted us to open a dialogue with the Ministry of Economic Affairs and Climate Policy, resulting in a letter to parliament from Minister of Economic Affairs and Climate Policy Eric Wiebes, in which he confirms his intention not to exclude any parties for the heating market and to examine how the grid companies can best fill their role.

Within Stedin Group, NetVerder is currently responsible for realising our strategic ambition: to develop heat projects with the aim of gaining experience in the market for heat. A successful example is our heat project in Delft, where a heat grid is being developed with an independent grid management role (similar in part to our role in electricity and gas). In addition, Stedin Group is anticipating various future scenarios to be certain that good market conditions for heat are created and to ensure that Stedin Group can play a significant role within this area in the future. Further work will therefore be undertaken in 2020 to develop the cooperation with the Ministry of Economic Affairs and

Climate Policy as well as contacts with local, regional and national politicians.

Regulatory model creates pressure

The energy transition calls for additionalinvestments to be made by the grid managers. These additional investments cannot be factored into their tariffs until a new regulatory period (2022). As a result, grid managers will suffer delays in recouping their investments and will incur an additional need for capital. In conjunction with the government, we must develop a model that provides the grid managers with sufficient financial resources to make the necessary investments while at the same time ensuring that the energy transition remains affordable. We are in dialogue with one another in this respect.

New technologies

Developments in the field of solar energy and electric cars are advancing rapidly. These trends calls for additional investments to be made in our electricity grids. At the same time, new technology as well as the installation of roughly 2,000 Smart Grid Terminals in the energy grid also enable us to track the energy flowing through the grid in real time and hence improve our grid management.

Reducing environmental impact

Care and attention to a valuable natural environment have increased in recent years. The focus is directed not just at the climate but also at people's immediate living environment. Stedin Group is therefore investing as well in reducing the environmental impact of its business operations; for example, by electrifying its vehicle fleet and preventing environmental as well as health risks by increasing employees' knowledge and understanding of hazardous materials through environmental workshops.

> ‘By transitioning together with Stedin, ProRail is guaranteed an uninterrupted electricity supply for the most important type of electric transport: the train.’

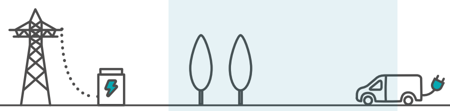
Marcel Walraven (centre) and Daan Verbaan (on the right) are both Energy Supply Systems Specialists at ProRail. They are teaming up with Gino de Windt (on the left), Account Manager at Stedin. 'Around 1.5 million people already take the train each day, and this number will see rapid growth in the decade ahead. More trains will need to run if all of these passengers are to be transported in a sustainable way. As a result, we have to make significant investments in the energy supply. To achieve such growth of train transport, ProRail is in constant consultation with Stedin.'

Value creation

We have developed a value creation model based on six categories to ensure that the social value that Stedin Group creates is visible for us and for our stakeholders. This model presents our initial exploration of measuring impact. We worked on this over the last year within a coalition of Dutch grid operators and infrastructure companies. The methodology is still under development, which means the methods, coefficients and indicators applied may change again in the future.

INPUT

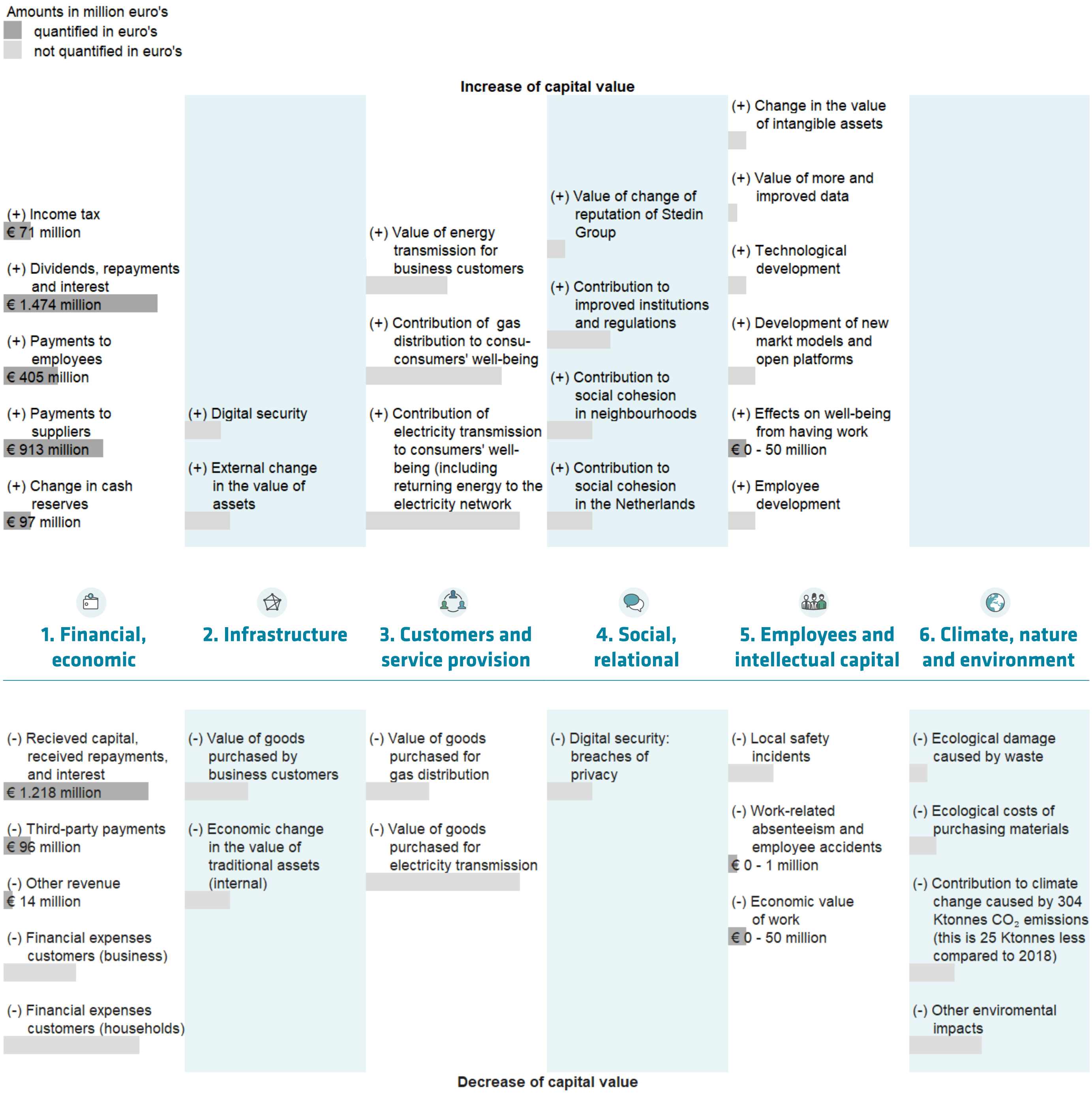
1. Financial, economic	2. Infrastructure	3. Customers and service provision	4. Social, relational	5. Employees and intellectual capital	6. Climate, nature and environment
• Net book value of grids € 6,655 million • Group equity € 2,949 million • Interest-bearing debt € 3,004 million • Regulated tasks • Financial policy	• 56,118 km of electricity cables • 28,216 km of gas mains • 4,423,146 connections • 38,294 stations • Investments in the grids € 646 million	• Shareholders (44 municipalities) • Customers (2.2 million) • Contractors and suppliers • Partners • Local authorities	• Talks with stakeholders about materiality • 7 environmental managers and 25 area directors	• 4,346 employees • Specific knowledge and expertise • Training and education	• Paris Climate Agreement • Purchasing of materials • 3,533,716 litres of fuel consumption by vehicle fleet • Energy consumption of buildings: 569,750 m3 of gas; 7,295,176 kWh of electricity; • 7.75 TJ of heat



OUTPUT

1. Financial, economic	2. Infrastructure	3. Customers and service provision	4. Social, relational	5. Employees and intellectual capital	6. Climate, nature and environment
• Net profit € 325 million • Operating profit € 172 million • Solvency 44.9%	• Smart meters offered 317,987 • Quantity of electricity transmitted 19,957 GWh and gas 4,651 million m^3 • Average downtime 20 minutes for electricity and 92 seconds for gas • Supply reliability of 99.9962%	• Customer satisfaction • Payments to suppliers • Data available • Collaborative ventures with partners • Memberships • Green Deals	• Externally reviewed materiality assessment • 23 Green Deals • Involved in 9 Regional Energy Strategies • Implementation of stakeholder value • Good and attractive employer and crucial partner in discussion on energy transition	• Salary payment • 4.8% absence through sickness • Gender ratio male 83%/female 17% • 17 FTE employees under the Participation Act • Employment • Income tax deducted at source • Employment practices • Our contribution towards an inclusive society	• 304 Ktonnes of CO_2 emissions 2 (scope 1, 2 and 3) • Recycling of materials • Making the built environment more sustainable • Making industry more sustainable • 100% compensation of CO_2 footprint electricity network losses by GoOs results in approximately 500 Ktonnes of CO_2 compensation

We have offered qualitative as well quantitative insight into the added value of our social impact on stakeholders. The six categories in the centre of the table represent the baseline. We present the benefits of what we do for society above the baseline and the costs as well as any inconvenience associated with what we do below the baseline. The information under the category 'Financial, economic' is in line with the IFRS figures from the 2019 financial statements and is quantitative. Our qualitative indication of all unquantified impact offers insight into the relative scope of our social impact on society. Finally, we explain the terms that cause capital value to increase or decrease in an overview on the next page. Through our impact, we contribute to the UN Sustainable Development Goals.



Result of impact measurement

Concept	Increase of capital value	Decrease of capital value
Financial, economic		
Incoming and outgoing cash flows have a positive as well as a negative impact on society (SDG 7, 8, 11).	Payments to suppliers and employees, tax paid, negative cash flows, dividends, interest and repayments are considered to be capital that is invested in society, for a total of € 2,960 million.	Capital raised for the financing of activities, third-party payments, other revenue as well as financial expenses for both business and private customers are considered to be capital that is withdrawn from society.
Infrastructure		
This category involves our regulated assets and is quantified in the IFRS financial statements (SDG 9).	By investing in digital security, Stedin minimises undesirable data exchanges. As a result, the online security of society improves.	If raised capital is invested in our material assets, the value of these assets increases. This value increase represents capital withdrawn from society.
	The value of our assets changes – for example, due to the expected positive impact of smart meters. This value change also applies to society.	The products and services intended for our infrastructure, which Stedin receives from suppliers, increase in value as a result. These products and services cannot be invested in society.
Customer and service provision		
Our standard business operations and their design affect the daily lives of our customers (SDG 7, 9, 11, 12).	The availability of energy contributes to the welfare and well-being of private as well as business customers. In this respect, Stedin creates value for society.	The products and services intended for the facilitation of gas distribution as well as electricity transmission, which Stedin receives from suppliers, increase in value as a result. These products and services cannot be invested in society.
Social, relational		
Our social capital is defined by how the public values Stedin and our activities.	Improving the reputation of Stedin Group increases customer satisfaction, reduces recruitment costs and creates new opportunities for cooperation. This increases our potential to create long-term value for society.	Leaking privacy-sensitive data has a negative social impact and results in loss of value.
Employees and intellectual capital		
Stedin affects the well-being of its employees both positively and negatively. We also create capital by investing in knowledge development (SDG 8, 11).	Having a job positively affects the well-being of the relevant employee. As an employer, we contribute between €0 and €50 million to the well-being of our employees, and hence to society.	Work-related absenteeism and accidents reduce the well-being of the people involved, as do safety incidents. We cause these situations as an employer and consequently decrease well-being in society. The resulting value is between €0 and €1 million.
	Stedin actively invests in knowledge development for future grid management. This approach raises the value of our immaterial assets, creates new market models/platforms and improves/increases data processing. Its application creates value for us and for society.	All employees devote time to their job. The total value of this time is between €0 and €50 million. Since this time cannot be spent elsewhere, we withdraw its value from society as an employer.
Climate, nature and environment		
Our normal business operations affect the climate, nature and the environment (SDG 12, 13).		In 2019, our normal business operations emitted 304 Ktonnes of CO_2, which has a negative impact on the climate, nature, the environment and hence society.
		As we are unable to recycle 100% of the materials used, the resulting waste causes ecological damage.

Sustainable Development Goals

Stedin Group contributes to attaining several of the goals defined by the United Nations in order to end poverty, inequality and climate change by 2030: the SDGs. We describe how we work to achieve the goals on which we have an impact.

SDG	Description	Application to Stedin and sub targets SDGs	Strategic priorities
7 BETAALBARE EN DUURZAME ENERGIE	Energy is essential for almost all major challenges and opportunities in today's world.	Via our grids, we offer our customers (renewable) energy to live, work and do business (SDG 7.2). Jointly with our stakeholders, we work on innovations that are necessary for a future-proof grid, ensuring that it remains affordable and reliable (SDG 7.1).	Facilitating the energy transition One Planet Thinking
8 EERLIJK WERK EN ECONOMISCHE GROEI	Our employees are the heart of our organisation. They ensure a reliable energy supply each and every day. We provide a safe working environment with plenty of opportunities for development.	Stedin is committed to ensuring equal opportunities, long-term employability and a workforce that reflects today's society. We promote an inclusive society; for instance, by offering young people with a disability and residence permit holders a trainee post (SDG 8.5). In executing our purchasing policy, we take our responsibility in the area of human rights, ethical conduct and employment rights. The safety of our employees and the local community is our top priority (SDG 8.8).	Professionally competent employees One Planet Thinking Integrity Safety & security
9 INDUSTRIE, INNOVATIE EN INFRASTRUCTUUR	Investments in infrastructure are crucial to make sustainable development possible.	Stedin Group works on facilitating the energy transition and fulfils a facilitating role for the sustainable development of the industrial cluster in the Port of Rotterdam, for instance (SDG 9.1).	Facilitating the energy transition Improved grid management
11 DUURZAME STEDEN EN GEMEENSCHAPPEN	The cities and communities of the future must offer opportunities to everyone through innovation and progress, including access to basic facilities such as energy.	Stedin Group helps ensure pleasant and sustainable urban environments by building and maintaining networks (SDG 11.6). Stedin Group is committed to the goals in the Climate Agreement and works towards them with its stakeholders (SDG 11.1; 11.2).	Facilitating the energy transition One Planet Thinking
12 VERANTWOORDE CONSUMPTIE EN PRODUCTIE	Sustainable consumption and production mean promoting saving raw materials and energy, sustainable infrastructure, appropriate working conditions and a higher quality of life for everyone.	Stedin Group devises and implements solutions to reduce its own energy consumption as well as to improve the sustainability of our grid (SDG 12,2). These solutions include intelligently balancing supply and demand as well as combating wastage (SDG 12.4; 12.5).	One Planet Thinking Professionally competent employees now and in the future Inclusive society
13 KLIMAATACTIE	Climate change affects all countries on all continents. Without intervention, the temperature on earth is likely to rise by more than 3 degrees Celsius this century.	Stedin Group conforms to the international climate objective. Through sustainable innovations, Stedin Group contributes to technologies and systems that combat climate change (SDG 13.1).	One Planet Thinking Facilitating the energy transition

Improved grid management | Facilitating the energy transition | Sustainable business operations

Stakeholders and materiality

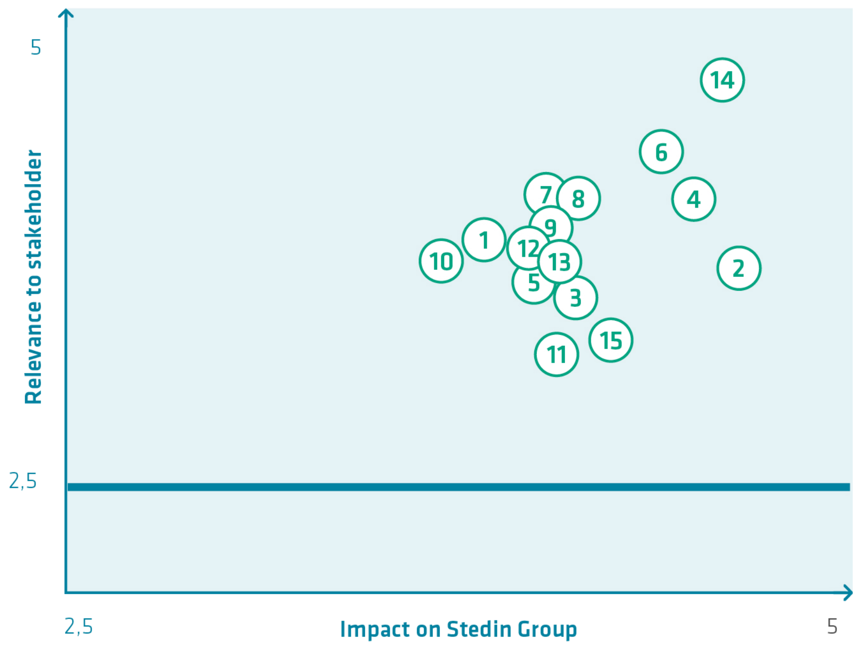
In 2019, we recalibrated our materiality assessment of 2018. The materiality assessment produced the following list of 15 material topics, which are directly related to our strategy, our control framework and our risk management.

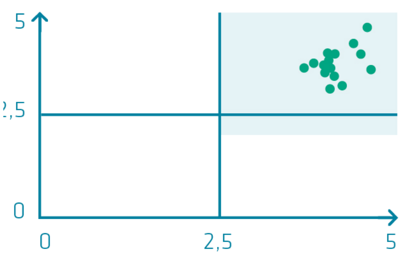
The materiality matrix below shows how important these topics are to us and to our stakeholders.
We used the following steps to arrive at the choice of material topics and to determine the materiality matrix for 2019:

1. The material topics were reviewed and ranked by the Board of Management in 2019. This approach resulted in 15 instead of 16 material topics. The material topic 'Reliability of energy supply, availability of grid' that was presented in the previous year was removed in 2019. This topic is very similar to 'Supply security' and also has the same key performance indicator (KPI). 'Improving sustainability of purchasing activities' was altered to 'Social responsibility in the supply chain' to reflect our ambition in this area better. In addition to making the annual selection of topics, the Board of Management is responsible for management and control in relation to them. This takes place by means of reports on the adopted KPIs, each issued at their own frequency (monthly, quarterly and half-yearly).
2. The Supervisory Board subsequently discussed and confirmed the choice and ranking of the material topics.
3. In a written survey, we asked representatives of our stakeholder groups to determine what impact each of the 15 material topics has on their business operations. They were also invited to add new material topics. In this way, they determine which topics we should highlight at any rate in our annual report. We defined the following stakeholder groups.
   - Internal: the members of the Works Council and the Makers of the Future (our trainees);
   - External: business customers, our customer panel, shareholders, local environment/communities, government and regulators, suppliers, the energy supply chain, NGOs, investors and rating agencies and partners. A total of 361 stakeholders indicated the impact of each topic.
4. The result of the ranking by Stedin as well as that by our stakeholders is reflected in the materiality matrix within this section. In the Connectivity table, we show how the material topics correlate to our strategy, risks, KPIs and objectives.

Materiality matrix

1. Economic, financial performance
2. Investing in infrastructure
3. Organisation's capacity for change
4. Smart grids, data technology and innovation
5. Heat transition
6. Supply security
7. Data security, privacy and cybersecurity
8. Customer satisfaction
9. Stakeholder dialogue and environment
10. Stedin Group's reputation
11. Sufficient technical staff, IT staff, ...
12. Training and development
13. Safety at work and in the environment
14. Contributing to the energy transition
15. Social responsibility in the chain





Connectivity, KPIs and targets

This section focuses on the connections between our strategy, the 15 numbered material topics, risks and opportunities as well as KPIs and targets. We group them according to the six categories from our value creation model.

Financial, economic 1 2 3

Material topic
1 Economic, financial performance

Strategic spearhead

Why is this topic relevant?
Stedin Group has a public task. We treat our social capital prudently and intelligently. A financially healthy Stedin Group has the necessary strength to facilitate the energy transition.

Connection to risks (R) and opportunities (O)
R: Uncertainties concerning long-term financing

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
FFO/Net debt position	≥ 12%	12.3%	≥ 12%	Results: • Financial results • Improved grid management Governance: • Risk management
Solvency	40%	44.9%	40%	
Efficiency/saving (estimated)	Capex* € 10 million Opex € 9 million	€ 14 million € 8.4 million	€ 26 million (Capex and Opex)	

* Capex are the Capital Expenditures, the costs related to developing and supplying our products and services. Opex are the Operating Expenditures, the operational costs to enable our business operations.

Material topic
2 Investing in infrastructure

Strategic spearhead

Why is this topic relevant?
In our view, it is important that the energy transition is achieved at the lowest public cost. We measure the investments against the objective of ensuring that the Netherlands is climate-neutral by 2050.

Connection to risks (R) and opportunities (O)
R: Uncertainties concerning long-term financing, Insufficient connection and transmission capacity

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Investments in future-proof energy infrastructure	€ 650 million	€ 646 million	€ 669 million	Stedin Group's Strategy Results: • Improved grid management • Facilitating the energy transition
Completion rate of smart meter installations	≥ 80% of offers	82% of offers	≥ 80% of offers	Governance: • Risk management
Number of smart meter offers	369,400*	317,987	Smart meter offered among 100% of population	

* Adjusted to 332,800 offers during the course of 2019

Improved grid management | Facilitating the energy transition | Sustainable business operations

Material topic	Why is this topic relevant?
③ Organisation's capacity for change	The environment in which we operate calls for flexibility, an agile organisation, and continual development of our talent and professional expertise, which calls for leadership.
Strategic spearhead	**Connection to risks (R) and opportunities (O)**
	R: Agility of the organisation

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Leadership programme	Complete and continue development of leadership programme	Achieved : 60 participants in leaderschip programme, 8 participants in executive leadership programme, 162 people attended kick-forward sessions	100% of the competences in the leadership profile have been elaborated in a four-point scale for desirable behaviour. The two-year programme for this purpose is attended by 50% of the managers. We reach 75% of the managers with two kick-forward sessions on alignment.	Results: • Professionally competent employees

Infrastructure ④ ⑤

Material topic	Why is this topic relevant?
④ Smart grids, data technology and innovation	We require smart grids in order to balance energy supply and demand. We deploy data technology for this purpose. By means of innovations, we contribute to the energy transition.
Strategic spearhead	**Connection to risks (R) and opportunities (O)**
	R: IT landscape insufficiently prepared for the future O: Disruptive technologies, Building a future-proof IT landscape

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Availability of smart meter data	97 %	97%	97%	Results: • Facilitating the energy transition

Improved grid management | Facilitating the energy transition | Sustainable business operations

Material topic 5 Heat transition **Strategic spearhead**	**Why is this topic relevant?** The heat transition in the built environment as well as the necessary storage and energy infrastructure entail an increase in work. Increased coordination as well as consultation with stakeholders, including municipalities, is also needed. **Connection to risks (R) and opportunities (O)** R: Uncertainties concerning changes in laws and regulations

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
The financial implications of the future energy system in districts and housing association properties have been quantified	50	2,500	n/a*	Stedin Group's Strategy Results: • Facilitating the energy transition
% of new-build projects requested are natural gas-free	80%	80%	n/a**	
Actively involved in 100% of the Regional Energy Strategies in our coverage area			100%	

* The aim of this KPI – determining scenarios for facilitating the energy transition in districts – has been amply met. This KPI no longer features in 2020.
** The '% of new-build projects requested are natural gas-free' category will rapidly increase, approaching 100% in 2020. This KPI no longer features in 2020.

Customers and service provision 6 7 8

Material topic 6 Supply security **Strategic spearhead**	**Why is this topic relevant?** We aim to improve supply security by taking initiatives aimed at reducing downtime and at preventing interruptions. **Connection to risks (R) and opportunities (O)** R: Cyberattack

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Annual average downtimeMV/LV (SAIDI) in minutes	≤ 17	20	≤ 17	Results: • Improved grid management Governance: • Risk management

Material topic

(7) Data security, privacy and cybersecurity

Strategic priority

Why is this topic relevant?

Security is essential for the continuity of our activities and those of our customers. We are working on integral security that connects the different areas of expertise. Privacy involves the careful processing of personal data of our employees, customers and other commercial relations.

Connection to risks (R) and opportunities (O)

R: Cyberattack
O: Building a future-proof IT landscape

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Number of data breaches	n/a	57 reports 49 followed by measures 3 reported to Dutch Data Protection Authority	100% of the data breaches that must be reported to the Dutch Data Protection Authority are reported within 72 hours. We always respond to any request by a data subject to exercise their data protection rights within four weeks.	Results: • Safety and security Governance: • Integrity • Risk management

Material topic

(8) Customer satisfaction

Strategic spearhead

Why is this topic relevant?

As we want to be a reliable partner for customers, the quality of our service provision and the satisfaction of our customers are important.

Connection to risks (R) and opportunities (O)

R: Insufficient connection and transmission capacity
O: Provide stakeholders and customers with more self-services

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Satisfied customers (Stedin) • higher than 8 • lower than 5	 69% 10%	 71% 12%	*	Results: • Improved grid management
Customer ease (Customer Effort Score) • Service ease • Lack of service ease			 68% 19%	
Satisfied customers (DNWG)	7.5	7.8	7.5	
Completion time for connections within 18 weeks or on date preferred by customer	≥ 85%	88%	≥ 90%	

* As of 1 January 2020, Stedin uses a new method to measure customer satisfaction: the Customer Effort Score (CES). This method allows us to measure the ease of the customer's experience with our services on a 5-point scale.

Improved grid management | Facilitating the energy transition | Sustainable business operations

Social, relational (9) (10)

Material topic	Why is this topic relevant?
Material topic (9) Stakeholder dialogue and environment **Strategic spearhead**	**Why is this topic relevant?** As an organisation with a public role, Stedin Group is firmly rooted in society. Dialogue with ourstakeholders is essential to achieving sound coordination on our mutual interests. **Connection to risks (R) and opportunities (O)** R: Uncertainties concerning changes in laws and regulations, Insufficient connection and transmission capacity O: Strategic supplier relationships, Provide stakeholders and customers with more self-services

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
% of new-build projects requested are natural gas-free	80%	80%	n/a*	Results: • Facilitating the energy transition Strategy: • Stakeholders and materiality
Actively involved in 100% of the Regional Energy Strategies in our coverage area	-	-	100%	

* The '% of new-build projects requested are natural gas-free' category will rapidly increase, approaching 100% in 2020. This KPI no longer features in 2020.

Material topic	Why is this topic relevant?
Material topic (10) Stedin Group's reputation **Strategic spearhead**	**Why is this topic relevant?** Because we are an important link in the energy transition as grid manager, an increasing number of organisations, administrators and citizens are forming an opinion about our role as well as our services. We are also a vital link as a partner. As a result, Stedin Group's reputation is critically important. **Connection to risks (R) and opportunities (O)** R: Cyberattack, Agility of the organisation, Impact of incidents, Loss of communication network O: Provide stakeholders and customers with more self-services

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Weighted average for Stedin's reputation:	Scale of 1 to 5	Scale of 1 to 5	Scale of 1 to 5	Governance: • Risk management
• consumers	3.3	3.3	3.3	
• business	3.48	3.5	3.5	

Improved grid management | Facilitating the energy transition | Sustainable business operations

Employees and intellectual capital ⑪ ⑫ ⑬

Material topic	Why is this topic relevant?
⑪ Sufficient technical staff, IT staff **Strategic priority**	Scarcity in the labour market and ageing within Stedin Group make it necessary to train existing or new staff ourselves. We invest in strategic personnel planning, have an in-house training school and seek staff in unconventional places. **Connection to risks (R) and opportunities (O)** R: Unavailability of enough people with the required technical competences

Material topic	Why is this topic relevant?
⑫ Training and development **Strategic spearhead**	The changes in the energy landscape are far-reaching and proceed rapidly. Our employees need to be and remain professionally competent so as to contribute to our mission. We promote a culture in which learning can take place continually and at any time. **Connection to risks (R) and opportunities (O)** R: Unavailability of enough people with the required technical competences

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Inspired and committed employees (on a scale of 1 to 10)	Inspired 7.5 Committed 7.7	Inspired 7.5 Committed 7.8	Inspired 7.5 Committed 7.7	Results: • Professionally competent employees • One Planet Thinking Governance: • Risk management
Number of work placements	> 1% of workforce	3.3% (145 interns)	> 1% of workforce	

Material topic	Why is this topic relevant?
⑬ Safety at work and in the environment **Strategic spearhead**	Working on the energy infrastructure involves numerous risks, which is why safety remains a priority, and why Stedin Group invests in knowledge, professional competence, safety measures and a good safety culture. This way, we ensure the safety of our customers, employees, contractors and hired staff. **Connection to risks (R) and opportunities (O)** R: Impact of accidents

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Lost Time Injury Rate (LTIR)	≤ 1.95	2.19	≤ 1.95	Results: • Safety and security Governance: • Risk management
Recordable Incident Frequency (RIF)	≤ 0.90	1.00	≤ 0.90	

Improved grid management   Facilitating the energy transition   Sustainable business operations

Climate, nature and environment (14) (15)

Material topic
(14) Contributing to the energy transition

Strategic spearhead

Why is this topic relevant?
We facilitate the energy transition through innovation and by cooperating with partners. We also ensure that our grids are and continue to be suitable for transmitting energy during the energy transition. We assist stakeholders by providing information about the grid. Stedin also wants to improve sustainability as much as possible.

Connection to risks (R) and opportunities (O)
R: Loss of communication network, Insufficient connection and transmission capacity
O: Provide stakeholders and customers with more self-services

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Completion rate of smart meter installations	≥ 80% of offers	82% of offers	≥ 80% of offers	Results: • Improved grid management • Facilitating the energy transition • One Planet Thinking Governance: • Risk management
CO_2 emissions in internal business operations	-9%	-13%	-9%	
Compensation of electricity network losses	100%	100%	100%	

Material topic
(15) Social responsibility in the supply chain

Strategic spearhead

Why is this topic relevant?
Stedin Group wants to improve the sustainability of its supply chain as much as possible. To this end, we are in continuous dialogue with our suppliers on topics such as child labour, human rights, corruption, use of sustainable materials, origin of raw materials, circularity and the greening of network losses.

Connection to risks (R) and opportunities (O)
O: Strategic supplier relationships

KPI	Target for 2019	Implementation in 2019	Target for 2020	Where can you read more about this topic?
Circular purchasing: • Material passport available during tendering process for primary assets	100%	100%	100%	Results: • One Planet Thinking Governance: • Integrity
• Purchasing volume of primary assets made transparent via material passports	> 18%	63.7%	100%	

Improved grid management | Facilitating the energy transition | Sustainable business operations

Results

We transition together with our partners to achieve the best results for our customers. Data and digitalisation also enable us to act increasingly faster and smarter. The results are described in this section. We link these results to our three strategic spearheads: improved grid management, facilitating the energy transition and sustainable business operations.

1. Improved grid management

We want to perform better by increasing the reliability of our grids, improving our service provision and enhancing the quality of our products and services.

Reliability of our grids

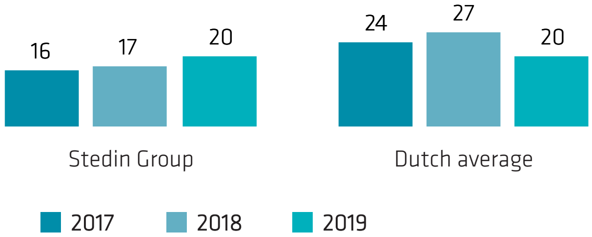
On average, customers were not supplied with electricity for 20.03 minutes in 2019 - a deterioration compared with 2018, when downtime averaged 17.01 minutes.

‘The 2019 figure equates to a supply reliability of 99.9962% (2018: 99.9968%).’

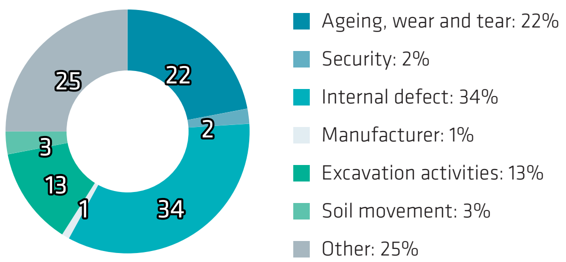
The average downtime for gas was 87 seconds in 2019, compared with 69 seconds in 2018. The main cause of the increased average downtime for gas is a number of major failures, such as the one in Heenvliet in May.

Average downtime for electricity and gas in 2019

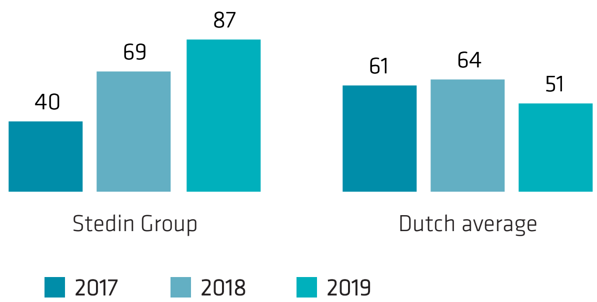
Annual average downtime for electricity (in minutes)



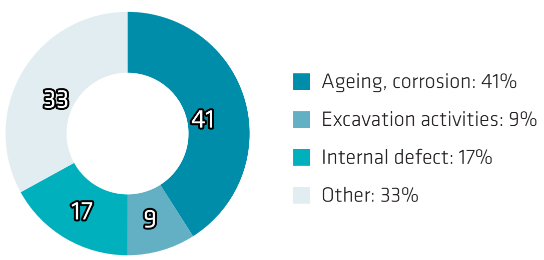
Causes of downtime for electricity (in per cent)



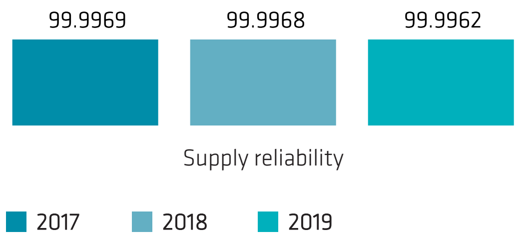
Annual average downtime for gas (in seconds)



Causes of downtime for gas (in per cent)



Supply reliability (in per cent)



Excavation activities

Excavation activities are often the cause of disruptions. The volume of excavation activities has increased for several years, rising by no less than 11% in 2019. This increase also leads to more excavation damage, resulting in a higher incidence of related disruptions. The growth in excavation activities is partly attributable to an expansion in constructionwork and demand for optical fibre. Roughly a quarter of excavation damage is the result of work to lay optical fibre.

Dig safe

In spring 2019, we launched a campaign together with the other grid managers aimed at creating awareness among consumers about the consequences of digging: 'Dig safe'. In the campaign, the grid managers give consumers and gardening contractors tips on avoiding damage to cables as well as pipelines; for instance, when sinking a post in the ground, or using an auger or spade. The campaign had a positive effect, with the number of recorded instances of excavation damage among consumers decreasing by more than 10% in the spring.

Smart, risk-based maintenance

In 2019, we took steps to make our grids even smarter. These steps had a positive impact on maintenance in particular: we use data to pinpoint where maintenance is really needed and where it is not essential. Mindful of our financial responsibility, we do all that we can to exploit our assets as long as possible in order to keep the social costs for the energy supply at a minimum. We refer to this notion as the 'risk reduction per euro'. This approach has resulted in savings of more than 4 million euros. In addition, data help to improve the quality of the grid and increase safety.

From 2019, we use data for maintenance in the following projects:

- Using the 'Condition assessment' ['Toestandwaardig'] method, we automatically calculate the condition of a medium-voltage station based on 10 indicators, including ground or soil type and age. This information tells us exactly for how long a medium-voltage station will remain operational. Whereas it used to be standard practice for them to be replaced after five years , we now know that they can remain in service for far longer; as much as twice as long in some cases.
- Subsidence is an indication of the potential risk of pipeline subsidence and hence whether a pipeline will begin to leak. We can map this subsidence using satellite imagery. Now, we are able to do so with greater precision than previously. We test suspect pipelines by means of a Partial Discharge measurement. This measurement involves using an inspection vehicle that can accurately determine the condition of the pipelines, which enables us to set priorities as well as replace sections locally.
- Stedin has developed an improved model for estimating the likelihood of pipeline failure over a period of 50 years. This model provides important input for risk assessment, and hence for maintenance and investment planning. More information is now available for less effort. In addition, the results of the model are easier to visualise in our geographic information system. This system ensures that the data are widely accessible across Stedin.

Cast iron gas pipeline explosion in The Hague

On 27 January 2019, a gas explosion rocked the residential area of Jan van der Heijdenstraat in The Hague. Ten people were injured in the explosion, one of whom had to wait for eight hours to be rescued from the rubble of the building. Three homes were completely destroyed and a further six were seriously damaged. Stedin assisted the emergency services by disconnecting the gas pipelines and electricity at the site. The immediate priority after the explosion was to care for the residents affected. An investigation into the possible cause of the explosion started a day later.

The Public Prosecution Service (OM) and the State Supervision of Mines (SodM), as the regulatory authority, investigated the cause of this serious incident. Specialists from research institute Kiwa were asked by the Public Prosecution Service to assist with the technical aspects of the investigation. Since a gas leak was identified as a possible cause of the explosion, Stedin gave evidence as a witness. Stedin was not permitted to conduct its own on-site investigation at this stage.

The Public Prosecution Service concluded the criminal investigation on 6 June 2019 and published its conclusion. At the same time, the State Supervision of Mines published the findings of its investigation. The investigation into the circumstances surrounding the gas explosion found that it was a tragedy for which no party can be held criminally liable. A crack was found in the gas pipeline under the street where the homes were located. While the investigations were unable to determine the cause of this crack, it was concluded that Stedin had done everything possible in advance to prevent the incident.

Impact of gas pipeline explosion in The Hague

The explosion made a profound impression on Stedin's employees. We consider the incident to be the low point of 2019. Although independent investigations found that Stedin was not to blame, we feel a sense of social involvement with the incident and we sympathise deeply with everyone who was injured or affected. For this exceptional situation, Stedin appointed a case manager who supported them and helped them navigate the handling processes for insurance as well as claims.

Accelerated replacement of cast iron

In the past, grey cast iron pipes were used as mains in the gas distribution network. This situation was also the case at Jan van der Heijdenstraat. Over the years, more modern materials became available, which are now commonly used for laying and replacing gas mains. The grid managers in the Netherlands launched a remediation programme during 2010 to replace all the grey cast iron gas mains in the country. In the light of the incident and the subsequent investigation, the State Supervision of Mines made four recommendations for Stedin and the sector as a whole. The State Supervision of Mines calls for a significant acceleration of the existing remediation programme for grey cast iron gas mains. The grid managers take the recommendations from the State Supervision of Mines very seriously. Among other things, these recommendations have resulted in the decision to speed up the replacement of all the cast iron mains in our service area. These mains were originally scheduled to be replaced by 2030, but this deadline has now been brought forward to 2028. A total of 53% have already been replaced.

High-voltage projects involving Stedin and Enduris

Stedin is involved in a large number of projects related to high voltage. An example is the proposed widening of the A27 motorway. In order to reduce traffic congestion, the Directorate-General for Public Works and Water Management (Rijkswaterstaat) has proposed to widen a large section of the A27. Since many of Stedin's networks are located along or nearby the motorway, they need to be moved or altered before the motorway can be widened. Work to widen the A27 between Utrecht-Noord and the Eemnes junction as well as the necessary re-routing have been completed. Re-routing activities for the section from Hooipolder to the Lekbrug bridge at Vianen are next in line. The work is scheduled to continue until 2024.

In the province of Zeeland, Enduris carried out the renovation of the 380kV station at Dodewaard commissioned by TenneT. The work consisted of replacing the severely outdated operating and security systems. This work was completed in November 2019.

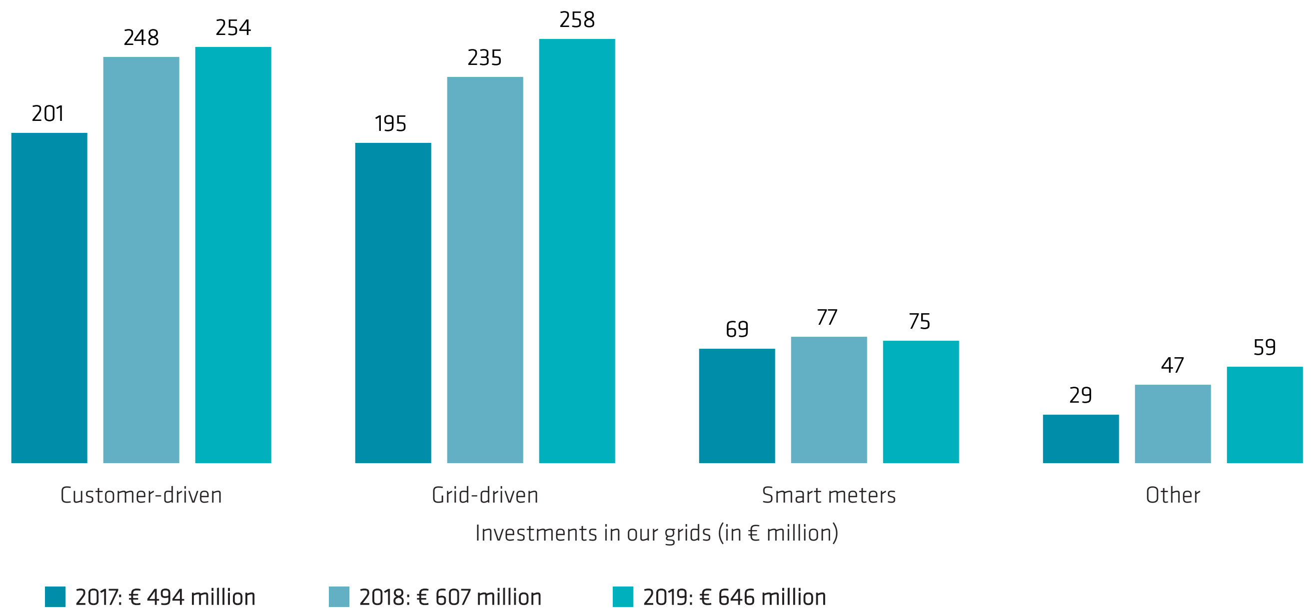
Roll-out of new fibre-optic network in all regions

Stedin took a new fibre-optic network (Stedin Telecom Network STN2020) into use in October 2018. This modern telecommunications network establishes a data link between all the station automation systems in transmission stations and the larger medium-voltage distribution stations in Stedin's area. The first data services started to run over the network in 2019. They included station security and data communication, improving our Network Operation Center's insight into the functioning of the energy grid. This network has now been implemented in The Hague and parts of Rotterdam. The aim is to have realised full service implementation across Stedin's entire area in two years' time.

Transition together
Proactive pre-investment in Houten

Pre-investment based on future scenarios is becoming increasingly important. Houten-Oost is a case in point. Here, we identified a capacity bottleneck, which was brought to light by the finding that up to eight applications for solar farms had been filed with the municipality of Houten. Instead of adapting existing stations, we held discussions with the applicants concerned. These discussions resulted in the decision to build a new transformer station close to the solar farms. We anticipate that this station will enable us to minimise the social costs. Since the road only needs to be dug up once, we will also avoid any unnecessary inconvenience.

Investments in our grids



Investments have increased in all areas over recent years.

' Stedin has invested € 646 million in customer-driven and grid-driven assets, smart meters as well as other assets.'

The investments are € 39 million (6%) higher than in 2018 and comprise 99% of the budgeted amount (2019: € 650 million).

Customer demand for smart meters stabilised in 2019. A shortage of gas meters also meant that fewer gas meter replacements were carried out last year than planned. You can read more about this matter in High-quality products and services'.

Our grid-driven investments in 2019 are in line with our long-term planning to achieve a sustainable improvement in the quality of the grid. Regarding gas replacements, more than 27,000 primary gas connections, 147 NEN 1059 control stations and over 120 kilometres of brittle pipelines were replaced. We also largely attained our target as regards electricity replacements through the replacement of 94 COQ/MIPAK stations.

It is our expectation that the customer-driven investments will remain substantial in the coming years, driven by the pace of the energy transition to which Stedin contributes and changing customer needs. This trend makes planning and adjusting investments more challenging than in the past. Several multi-year efficiency programmes were launched in 2018, aimed at ensuring that we retain our financial health and our ability to fund the investments required by the energy transition as well as keeping those investments affordable in the long term. By improving our work efficiency and making our investment planning more risk-based, among other things, we were able to achieve a saving on investments of more than € 14 million in 2019.

The other investments increased as a result of the investments in the property at Nijverheidsweg in Utrecht due to the review of the real estate portfolio. In accordance with the strategic real estate plan, Stedin Holding N.V. purchased the building at Nijverheidsweg in Utrecht on 1 March 2019. This purchase enhances flexibility for the optimum utilisation of real estate, enabling savings to be achieved on the overall real estate portfolio in the future as well.

Affordable and efficient services

Smart and digital are the norm in efficient business operations. Efficiency means cost savings, but also shorter lead times, less inconvenience for local residents and increased customer satisfaction. Below, we give a number of examples that illustrate the benefits.

Multidisciplinarity, efficiency and customer satisfaction go hand in hand

Coordinating activities with partners 'below ground' enables us to achieve substantial economies of scale. We now have cooperation agreements with water companies Evides, Vitens and Dunea. There is significant overlap within this coverage area with Evides in particular. At the moment, Stedin and Evides coordinate their activities across no fewer than 70 projects. Simply working at the same time allows us to achieve a cost reduction of 6%. We expect that we will eventually be able to achieve a 20% cost reduction. Environmental benefits occur as well, such as less inconvenience for local residents from roadworks. There is tremendous potential in this multi-disciplinary approach, given the scope that it provides for avoiding many more duplicate costs. We will expand this approach further in 2020. From 1 January 2021, we will contract a single contractor more often to carry out our joint activities. This process will allow us to cope with the scarcity of contractors as well as to contain costs.

First Time Right

At Stedin, we believe that it is important to do things right the first time. This approach leads to increased efficiency, effectiveness, safety and customer satisfaction. We have set up measurements within a range of different processes to show how much of what we do is First Time Right. Within Construction & Replacement, the full and accurate delivery of data on outside work in one go is a leading priority. In 2019, we were successful in 81% of cases. This figure is a slight improvement compared with 2018. We also endeavour to implement the large-scale roll-out of smart meters the first time right as far as possible, reducing the volume of additional work and eliminating the need for returning to the same customer. Here as well, we are successful in four out of five cases.

Process improvement with contractors

We concluded master agreements with our principal contractors three years ago. At the end of 2018, the agreements were extended by two years and we commenced preparations for process improvements. This will allow us to better match supply and demand concerning personnel deployment, and contractors will now perform a larger portion of the preparatory activities. This way of working is more efficient. We are also improving the quality of delivery. Implementation commenced on 1 January 2019.

Efficient connection of charging stations for electric cars

The number of electric cars in the Netherlands continues to grow each year. Demand for electric charging points is expected to double in the coming years. As with other connections, the waiting time for connecting a charging station is 18 weeks. Stedin is successfully developing an efficient method for installing charging stations quickly and at lower cost in Utrecht, The Hague as well as Rotterdam. Three parties are involved in the installation of charging stations: the municipality, the charging station operator and the grid manager. In practice, the work carried out by these

Transition together

Collaboration in Waalhaven-Zuid

In Waalhaven-Zuid, an area that looks out over the Port of Rotterdam, Evides and Stedin are coordinating their activities below ground. Waalhaven-Zuid is a sprawling area covering 105 hectares that is being completely redeveloped. It is also a complex area, with polluted port sludge and unexploded ordnance, whose accessibility for transport companies must be safeguarded. In total, the work involves replacing 5.8 km of cast iron gas mains with PE gas pipelines, as well as replacing 3.3 km of low-voltage cables and 1.2 km of medium-voltage cables. The replacement is being carried out simultaneously with Evides. There is one operations team that is responsible for execution, progress, safety, accessibility and environmental management in the area. A special feature is the intensive involvement of the Port of Rotterdam Authority and the municipality of Rotterdam in the project as well. This collaboration has many benefits, including reduced environmental impact and an expected cost reduction of 15%. The exchange of knowledge, such as working in a proactive safety culture, is also valuable. The project started in August 2018 and is scheduled for completion by September 2020.

three parties does not always take place at the same time. It is not uncommon for a parking space to be reserved first, followed by the actual installation of a charging station several weeks later, for example. This process is frustrating for residents and drivers of electric cars alike. The new working method will solve this problem. The three parties nominate one party that is authorised to carry out all the steps in one go.

Centralisation of support activities

Stedin facilitates the energy transition by focusing on core tasks. This approach also extends to our internal operations. Support processes are centralised as far as possible, freeing operational departments to concentrate on their core tasks. In 2019, we started a process of intelligently standardising and combining of administrative tasks. The resulting quality and efficiency improvements are expected to reduce costs by 25–30%.

You can read more about the savings produced by our five-year efficiency programme in the section on Financial results.

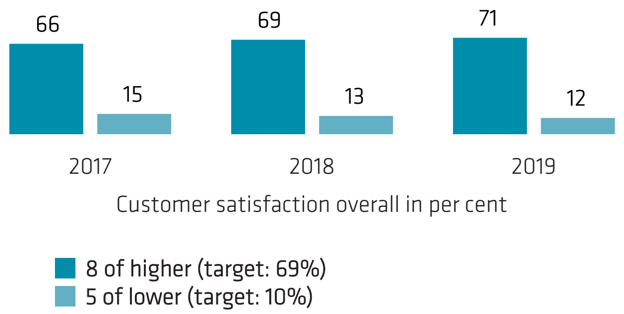
‘Ans Groenewegen, Dunea: Dunea and Stedin inspire each other towards synergy through their knowledge. We are aligning short and long-term investments in our infrastructure as well as relevant schedules. Our ambition is to do the same with municipalities in a three-way consultation. This process has proved to reduce social costs and inconvenience for the consumer.’

Ans Groenewegen (Dunea Duin & Water) and Gijs Lambooij (Stedin Netbeheer) are both Strategic Environmental Managers. Gijs Lambooij: 'True cooperation is built on trust. You develop this trust by "transitioning together" at a very early stage, which is exactly what Dunea and Stedin are doing. One example of this is the use of a covenant in which mutual implementation is aligned as soon as possible. Another example is complicated renovation work in the city centre, for which we enter into a joint dialogue with the municipalities as well as the environment early on to discuss the manner of implementing the work, as well as its usefulness and necessity. '

High-quality products and services

Customer satisfaction overall

The majority of our customers give a score of 8+
Customer satisfaction in 2019 exceeded our ambition: 71% of our customers give us a score of 8 or higher (2019 target: 69%; 2018 target: 67%). The score is also higher than in 2018. In particular, customers are positive about our approach to remedying failures and about smart meter installation. Customers have an extremely positive opinion about our fitters.



In terms of unsatisfied customers, the figure is less positive: 12% give us a score of 5 or lower (2019 target: 10%). Although fewer customers gave this score than in 2018 (2018 target: 12%), it is not yet in line with our ambition: we want to remain below 10%. The principal causes of these scores are the lead time of connections and the communication during the application period, both of which are viewed as less positive. Customers think that the process takes too long and would like more communication on the process.

Customer satisfaction at DNWG was the same in 2018 and 2019, scoring an average of 7.8.

Customer satisfaction: adopting a new measurement method
Stedin measures customer satisfaction by asking for feedback after each contact moment. Customers are asked to answer roughly ten questions about our services and to give us a rating. As of 1 January 2020, Stedin is introducing a new method to measure customer satisfaction: the Customer Effort Score (CES). This method allows us to measure customer ease.

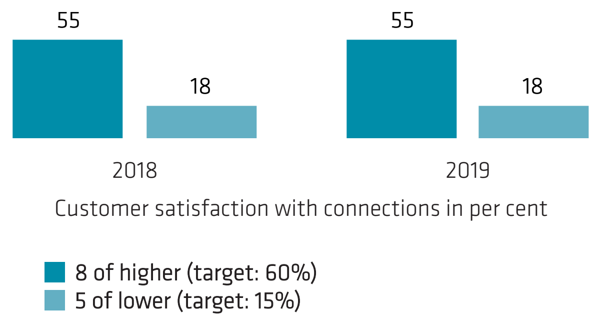
In this new survey, customers decide themselves what they consider to be important. This information gives us a better understanding of the contact moments that are decisive in the customer relationship and of where improvements can be made. It also improves the customer experience when filling in the survey. In addition to the CES questions, we ask customers to give us an Employee Enthusiasm Score (EES) as well as. This score ensures that employees receive even better personal feedback.

'Natural & personal' – Different tone on social media boosts appreciation rating

We launched the 'Natural & personal' ['Lekker losjes'] project to change the tone of our webcare so it better matches how our customers speak. Instead of giving answers that sound as though they are scripted, our employees have the freedom of responding to customer queries in a natural and personal way. Satisfaction with our webcare has gone up by 10% as a result. An added benefit is that our employees are freer to be themselves when chatting with customers.

Customer satisfaction with connections

Since 2018, we have measured customer satisfaction with regard to connections. We made efforts to improve customer satisfaction with connections in 2019. Despite the measures that we implemented, customer satisfaction with connections is still not at the level which we would like to see.

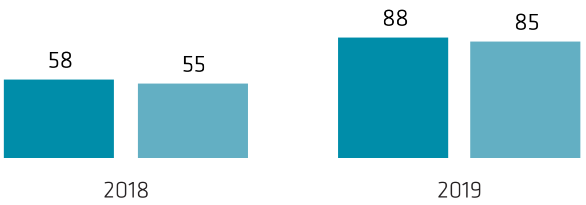


We fell just short of our target to have 60% of customers rate us 8 or higher. During most months, this figure hovers around 55%. We also failed to achieve our target to have fewer than 15% of our customers rate us 5 or lower. This figure is closer to 18%. There are different reasons for this fact. The first is that the number of requests increased by roughly 20% in 2019. These requests are varied, from connecting charging infrastructure for electric vehicles to removing gas connections and the increased demand from municipalities. Our commitment to more efficient working practices means that the number of FTEs did not grow in proportion to this increase, however.

To improve our customer service, we adapted the organisation in 2019 to working at the product level instead of the regional level. This process results in greater focus and specialisation. The change had a temporary negative impact on the lead times of quotations.

We also experienced an equipment-related problem in 2019. The energy transition caused a substantial increase in demand for materials, especially cables and medium-voltage stations. These materials are difficult to source from suppliers in much greater volumes on the short term. As a result, the delivery time negatively affected our operations. While roughly 200 projects suffered delays as a consequence, we fortunately did not need to cancel any. Although 200 is modest compared with the total number of projects, we are nonetheless seeing an increased volume of complaints. Deliveries have now picked up again, while we have also contracted new suppliers from Finland and Germany.

Time limit of 18 weeks for connections
Despite the setbacks, we managed to meet 88% of all requests within the 18-week statutory time limit for connections. In other words, we achieved our target of 85%. We also achieved our target of having 90% or more of our customers rate our performance as satisfactory for the delivered work. At the same time, we note that customers are regularly dissatisfied with the lead time even when we provide a connection within 18 weeks. They expect faster delivery. Next year, we aim to have 90% of work completed within the statutory time limit for connections. We also want 65% of customers to rate us 8+ and fewer than 10% of customers to rate us lower than 5.



'Time limit of 18 weeks' or on customer requested date in per cent

Result   Target (of higher)

Collectives desk
Stedin's Collectives Desk answers questions that energy collectives may have on subsidy schemes, feed-in connections and meters. In 2019, Stedin connected 27 projects of energy collectives, with feed-in connections for returning energy to the grid. Enduris did the same in Zeeland for four energy collectives.

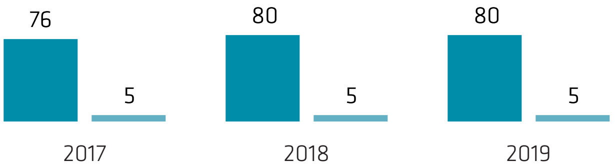
Transition together: Digital Public Lighting

In 2018, we introduced a customer portal in collaboration with customers and clients for connecting public lighting: Digital Public Lighting (OV Digital). The positive effects were evident in 2019. Customers can track precisely where they are in the process and appreciate the resulting transparency. An additional benefit is the improved cooperation with customers thanks to the ease with which information can be exchanged. As a result, we can transition together in a smart way, save costs and improve customer satisfaction. The satisfaction rating among municipalities increased by 1.5 points compared with 2018 as regards public lighting (from 5.6 to 7.1).

We are configuring the portal for other services as well. In 2020, customers can also track the process of replacing or moving their connection, among other things.

The smart meter

Customer satisfaction with our smart meter offer
Our customers continue to be satisfied with the offer and installation of smart meters. The figures are identical to 2018. As last year, 80% of our customers rated us 8 or higher in 2019 (target: 79%, 2018: 74%) and 5% of our customers rated us 5 or lower (target: 5%, 2018: 5%). Customers are most satisfied by the friendliness of the fitter (82%). The unsatisfied customers were least satisfied by the fitter's failure to come (at the agreed time).



Customer satisfaction smart meters in per cent

8 of higher (target: 79%)
5 of lower (target: 5%)

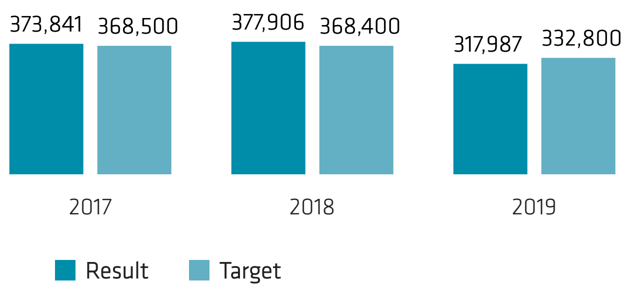
More than 1.5 million smart meters installed
Stedin installed a smart meter for the 1.5 millionth time at one of our customers in October, which is an impressive milestone. The offer of smart meter installation is in its second-to-last year, with the large-scale provision of smart meters set to end in 2020.

> 'By the end of that year, 2.1 million customers should have been offered a smart meter.'

The aim is for at least 80% of all households to have a smart meter by the end of 2020.

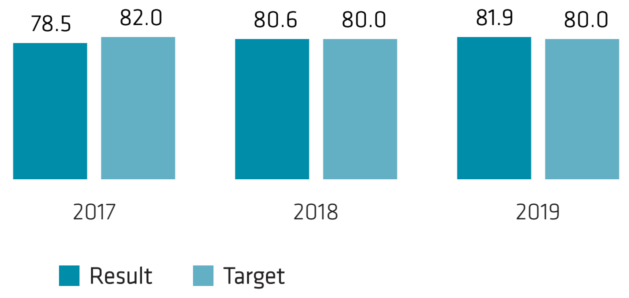
Completion rate of smart meter installations

Number of offers



In 2018, we set ourselves a target of 369,400 offers in 2019. In early 2019, following analysis, we decided to revise this figure to 332,800 so we could spread all the outstanding offers still to be made until the end of 2020 evenly over the remaining months. Otherwise, we would have had to scale up capacity in 2019, only to scale it down significantly in 2020. This decision has ensured a more gradual process. In 2019, we offered a smart meter to a total of 317,987 households. This figure is below our target of 332,800 offers.

Completion rate (in per cent)



The target for 2019 was to install a smart meter in 80% of all households. We achieved a figure of 81.9% in this year.

Causes of failure to achieve target for number of offers
There are several reasons why we did not achieve our target. The first is the transition to working in the cloud during the first quarter of 2019. This transition was followed by problems affecting the performance of our software system, which influenced production. The teething problems were resolved during the same quarter and the system functioned properly for the remainder of the year.

The second reason is a shortage of smart gas meters in the summer. One of our suppliers stopped delivering these meters from the end of 2018 due to quality issues that they faced in 2018. We were able to cope well with the shortage of gas meters by adopting a different and more intensive approach to working with all the departments involved in installing smart meters (via the Sales and Operations Planning process). This approach enabled us to make timely and joint decisions on scaling down the size of our external flexible workforce, which prevented a sudden exodus of staff. Although we took action in good time, the downscaling negatively affected the achievement of our targets. There were no problems with the quality of the meters in 2019.

Finally, we notice that it is the 'more difficult' addresses with exceptional situations which still need to be approached towards the end of the large-scale provision.

Despite not achieving the target, we still aim to complete the large-scale offer and provide smart meters on schedule next year. We believe that this aim is feasible.

Improved operational planning helps fitters
In 2019, we implemented a series of improvements that are intended to help our fitters in their work. An example is more efficient planning and the introduction of smarter routes. The journey time for fitters has decreased by roughly 30% as a result. The IT system that we use for this purpose will be rolled out more broadly across Stedin in 2020. We have also planned the quality and safety inspections automatically since 2019, so inspectors are at the customer's home within two hours of meter replacement. The number of customers at home has increased by 7–8% as a result of this improvement.

From information to savings
We provide information to encourage the use of smart meters among customers.

‘Good use of smart meters can provide energy savings.’

We continued to provide this information in 2019.

Additional mandate from Ministry
The large-scale offer to provide smart meters will end in 2020. The Ministry of Economic Affairs and Climate Policy has additionally mandated the grid managers to ensure that all homes are fitted with a suitable smart meter that can register the amount of energy supplied and the energy returned to the electricity network by the end of 2022. In other words, they should actively approach the remaining 20%.

Ad Stouthamer from Breukelen is one of the 317,987 Stedin customers who received a new smart meter in 2019. Mustafa Karapinar is the fitter who installed the smart meter for him.

2. Facilitating the energy transition

The Climate Agreement is a prime example of transitioning together. People from all regions and sectors have contributed to its formulation as well as its creation. The Climate Agreement was signed in 2019 and makes it clear as never before what our task is. Our efforts to facilitate the energy transition are guided by the Climate Agreement.

A major step forward

Our infrastructure is similar in many ways to today's motorways: heavily congested at certain spots, making it necessary for us to use the rush-hour lane. The number of requests for connecting wind and solar farms to our grid increased sharply in 2019. A major step forward was also taken in terms of electric transport. We therefore need to take measures in order to ensure that the energy transition remains feasible as well as affordable.

It is often said that knowledge is power, which certainly applies to the year under review. We made it our focus in 2019 to gain more insight into our grids through the use of data; grid analysis has been raised to the next level. This analysis helps us to ensure that the adjustments in our infrastructure which are needed for the energy transition remain affordable and manageable.

Insight into our grids

Data analysis helps us to identify the vulnerabilities and weak spots in our grid as well as where the grid still has free capacity. The focus on data as well as analysis has shown us how complex our ICT systems are and that they involve processes which are often far more laborious than imagined. While our ICT systems have been made more future-proof, we still have work to do. As a result, changes sometimes take longer to implement than hoped. We are all working hard on resolving this issue.

Five climate platforms

In this section on how we are facilitating the energy transition, we adhere to the themes highlighted in the five climate platforms set out in the Climate Agreement: Built Environment, Industry, Mobility, Agriculture and Land Use, and Electricity.

Built Environment

Efforts to make the housing stock more sustainable are advancing well, but are they progressing quickly enough? In this section, we discuss four initiatives that help to speed up the improvement of sustainability in the built environment: alternatives for existing buildings, pilot areas for natural gas-free districts, cooperation with housing associations and natural gas-free new housing developments. This way, we help municipalities and housing associations to make choices.

Alternatives for existing buildings

All local authorities in the Netherlands must provide a transition vision for heat by the end of 2021. This vision shapes the direction of the district-oriented approach, in particular on alternatives for natural gas. Our 25 area directors and account managers are engaging with the first municipalities that have begun the development process for this purpose. Our advice to municipalities is contained in our Opening Bid.

When deciding how to heat districts, municipalities can opt for a heat grid, for a fully electric solution with heat pumps and perhaps also for sustainable gas in due course. Where municipalities have yet to make a choice, a hybrid interim solution is available to residents and housing associations. While a hybrid heat system is not entirely natural gas-free, it does reduce gas consumption by approximately 30-40%.

Ensuring the complex coordination of work for removing gas connections and increasing electricity grid capacity allows us to help customers better as well as more quickly.

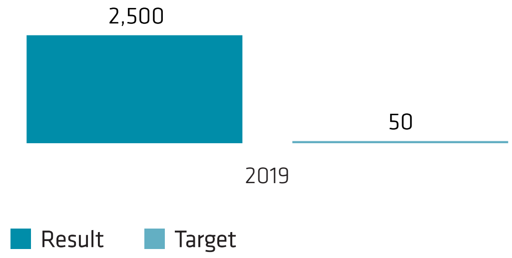
Test beds for Natural Gas-free Districts

Stedin's service area includes 7 of the 27 test beds for natural gas-free districts. Each district is characterised by its own dynamics and planning phase. The Sliedrecht-Oost test bed represents our first ever investment in an existing natural gas-free district, in cooperation with the heating company, the municipality and the housing association. We expect a second tranche of test beds in 2020, for which we will use the lessons from the first tranche.

Dialogue with housing associations

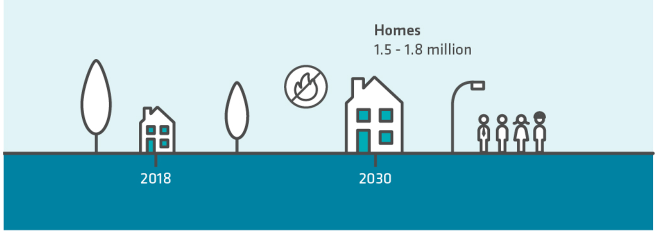
The housing association sector is designated as a catalyst of the energy transition in the Climate Agreement. We have therefore seen an increase in requests from housing associations for the removal of gas connections. This increase has prompted us to expand our cooperation with them. We organised two meetings in the spring to explain our approach and to discuss how we can coordinate our plans. In the autumn, we visited housing associations to start a dialogue on cooperation. We plan to organise sessions on cooperation with multiple housing associations in our service area during 2020.

Quantification of financial implications for districts
The aim of calculating the financial effects of the future energy system in districts and of the housing association stock is to find out which scenarios are most effective in facilitating the energy transition. We manually quantified the financial implications for the first districts, which allowed us to determine a method for speeding up the process. In 2019, we quantified the financial implications for a total of 2,500 districts.

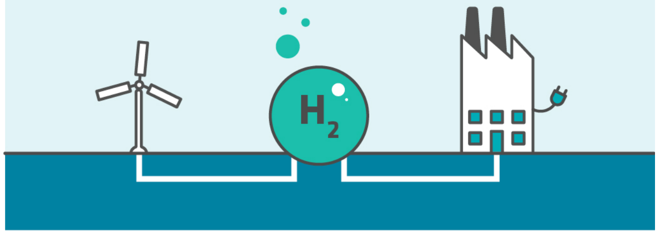


Climate Agreement objectives CO_2 reduction by 2030

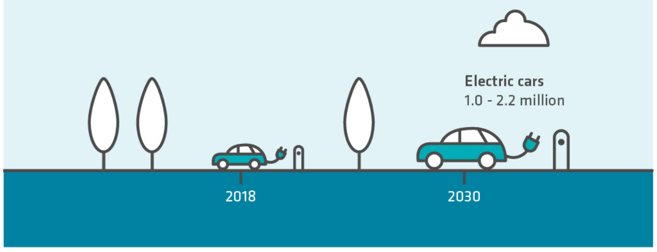
Built environment
Targeted CO_2 reduction by 2030: 3.4 Mt



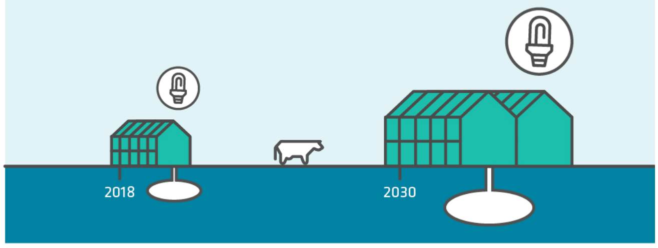
Industry
Targeted CO_2 reduction by 2030: 14.3 Mt



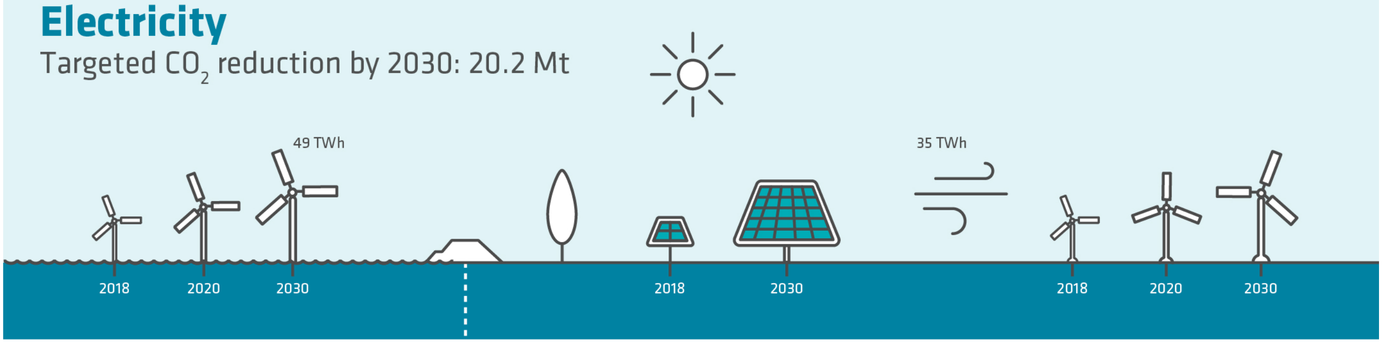
Mobility
Targeted CO_2 reduction by 2030: 7.3 Mt



Agriculture and horticulture
Targeted CO_2 reduction by 2030: 3.5 Mt



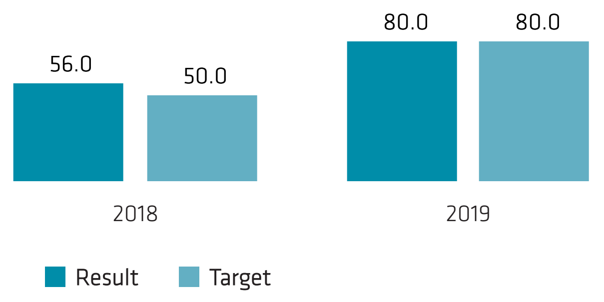
Electricity
Targeted CO_2 reduction by 2030: 20.2 Mt



Natural gas-free new housing developments

No planning permission for new housing developments with natural gas has been granted since July 2018. However, new-build projects for which planning permission was requested before July 2018 may still be constructed with natural gas. Together with the municipalities, Stedin has undertaken to convince developers of building natural gas-free nonetheless. It did so in 2018 by entering into covenants with most municipalities in our service area and in 2019 by intensifying cooperation with the municipality of The Hague. Along with other factors, this approach resulted in four out of five applications for planning permission for new housing developments being natural gas-free in 2019. In the fourth quarter, the percentage of applications for new housing developments hovered around 90%. Stedin expects the number of gas-free new-build homes that will be built in 2020 rapidly to approach 100%.

Applications for natural gas-free new-build projects (in per cent)



Heat grids

Stedin Group seeks to accelerate the energy transition by actively exploring how to improve the sustainability of the heat supply in the built environment within its service area. In addition to electrification, collective sustainable heating is an alternative to make the built environment natural gas-free. NetVerder B.V. (which operates in the 'non-regulated' segment) therefore continued developing a portfolio of projects focused on collective heat systems in the past year driven by the public interest. You can read more about this topic in Non-regulated activities.

Transition together in practice

Strategic environmental management is inseparably linked to the energy transition. We want to exchange information with other organisations and stakeholders at the earliest possible stage in order to ensure effective coordination of plans. We do so in several ways; for example, by making data on our grids publicly accessible and by concluding covenants as well as agreements for long-term cooperation with municipalities and other parties. In addition, Green Deals were signed in 23 municipalities on gas-free housing, so as to make at least one neighbourhood natural gas-free in each municipality.

The role of the grid manager and the legal obligation to cooperate with local parties on work for new stations, for instance, present an interest challenge. Additionally, it is important for us to be able to contribute to the environmental planning visions drawn up by local authorities. Cooperation between the various parties will become even more important in this area.

Transition together/Innovation

Opening Bid – alternatives for natural gas

The Opening Bid contains advice for municipalities on the socially desirable alternative to natural gas in each of the more than 3,000 districts in the service area of Stedin and Enduris. This Opening Bid focuses on existing buildings and draws from the three main Dutch models for the energy transition which currently exist: Vesta by PBL Netherlands Environmental Assessment Agency, CEGOIA by CE Delft and ETM by Quintel Intelligence. By intelligently combining the outcomes of these three models, additional information comes to light which would not be obtained from a single model alone; for instance, how robust the choice of a particular alternative to natural gas is. An initial, provisional version of the Opening Bid was prepared in March 2019. Its aim was two-fold: to assess whether it works and whether it would be taken up. Buoyed by the positive responses, we delivered Opening Bid 1.0 at the end of 2019, which Stedin will release in February 2020.

Transition together
100% Hydrogen heating in Rozenburg

An apartment complex in the Rotterdam district of Rozenburg has been heated by 100% hydrogen central heating boilers since June 2019. A third boiler was added at the last moment to join the boilers provided by Bekaert Heating and Remeha, which were announced back in 2018. This third boiler was developed on behalf of GasTerra. We are responsible for implementing the project together with our partners DNV GL, the municipality of Rotterdam and the housing foundation Ressort Wonen.

The demonstration project is unique both nationally and internationally, particularly since the locally produced green hydrogen is transported through an existing, unmodified natural gas pipeline owned by Stedin. As a result, it is no surprise that the project has attracted considerable interest at home and abroad. In Rozenburg, Stedin is demonstrating that one of the pieces of the puzzle that makes up the energy transition – hydrogen – is closer than many people think. Its technical feasibility has already been established and this project showcases hydrogen as an alternative that deserves to be taken into consideration in analyses. Furthermore, the project in Rozenburg is a prelude to a larger project: we will heat 550 existing homes in Stad aan Haringvliet entirely by hydrogen from 2025. We will do so using Stedin's existing local gas grid.

Four residential complexes in Hendrik-Ido-Ambacht (at IJdenhove and Van Assendelftgaarde) are undergoing large-scale, sustainable renovation. All of the 197 homes are being made fully electric. Together with his Stedin colleagues, fitter Joop Korf is responsible for disconnecting these homes from natural gas. Mr Goedgebuur is one of the residents of the complex.

Making industry more sustainable

The Rotterdam port area is the largest industrial cluster in the Netherlands. Future-proof energy transmission is crucial in helping this area to become more sustainable. Intensive cooperation and sound, robust planning are crucial to this ambition.

Study of implications of energy transition for electricity grid

It is certain that the energy transition will lead to increased demand for renewable electricity by the industry in Rotterdam. We joined TenneT and the Port of Rotterdam Authority in carrying out a study of the precise implications of the energy transition for the electricity grid in the port area. An earlier study by the Wuppertal Institute found that demand will grow by a factor of two to three. This electricity is mainly needed for the electrification of industrial processes, for making green hydrogen and for the increased electrification of transport.

To this end, the electricity grid in the port needs to be reinforced in the coming decades. The physical space available for doing so is limited both above and below ground. Furthermore, the current approach is determined by existing legislation and regulations, which leads to higher social costs and longer lead times. It is better if the steps that we take to reinforce the electricity grid are rather guided by a long-term vision.

The 'Study of the implications of the energy transition for the electricity grid' contains three recommendations for ensuring that the necessary reinforcement of the grid is performed in a timely manner and at the lowest possible cost:

1. Legislation and regulations must be amended for infrastructure to be built on the basis of a long-term vision (2050), instead of always acting in response to individual queries from companies. This approach ensures lower total costs (no laying of parallel cables), shorter lead times and minimisation of physical bottlenecks. After all, space in the port area is limited.
2. The Ministry of Economic Affairs and Climate Policy must exercise control to designate locations directly on the coast for the large-scale conversion of electricity (offshore wind) into hydrogen. This hydrogen is an important raw material to make the industry more sustainable, since transporting hydrogen requires far less space and lower investment than electricity transmission.
3. Physical space must now be reserved for the future electricity infrastructure. This measure allows us to roll out a robust and future-proof electricity grid in phases.

Working Group 'Rotterdam Port Industry Complex Infrastructure

The Rotterdam Port Industry Complex brings together many different systems that are all undergoing a transition. They include energy systems and raw materials for industry, as well as transport by land and water, for example.

Based on our current understanding, we anticipate that approximately € 1.5 billion will need to be invested in electricity transmission as well as the transport of CO_2, hydrogen, steam and residual heat until 2030. It is not clear at this stage which technology choices the industry will make, or when they will make those choices. As a result, it is difficult to press ahead with the development of new infrastructures at this time. At the same time, complex infrastructures take quite a long time to build. This situation can result in a mismatch between supply and demand. Grid operators are therefore teaming up with industrial parties and other relevant partners looking for new forms of cooperation.

As a first step, the Working Group Rotterdam Port Industry Cluster Infrastructure has been set up with the aim of facilitating knowledge-sharing and development. This working group, which originated from the regional sector body Industry Rotterdam Moerdijk, is chaired by the Port of Rotterdam Authority and Stedin. Other participants are Deltalinqs, TenneT, Gasunie, the province of South Holland, the municipality of Rotterdam and the Institute for Sustainable Process Technology (ISPT).

An example of knowledge development and sharing is the Study 'A port filled with new energy', in which parties examine the effects of the transition on the electricity grid.

The Working Group's projects:

- **Model for Adaptive Investment Strategies – Phase 1: Windmaster; Phase 2: Gridmaster.** The aim is to develop a model that provides better insight into potential transition pathways, necessary infrastructure and investment strategies.
- **Energy Mix Study.** In this study we identify the potential changes affecting the energy and raw material systems of roughly 30 companies in the Rotterdam Port Industry Cluster. The study will be completed in Q1 2020.

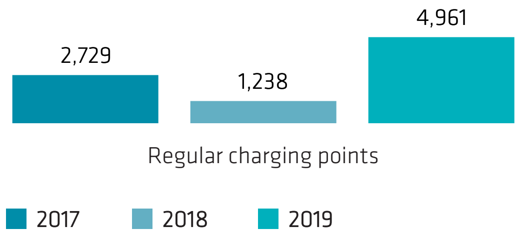
Other projects:

- **HydroHub Innovation Programme.** The industry, port companies, grid managers and other partners investigate the potential of various hydrogen supply chains.
- **The Climate Agreement on Industry Infrastructure Task Force** advises the Minister on the conditions for building the necessary infrastructure with a view to the industry's transition. In 2019 our CEO Marc van der Linden was appointed to the advisory council of this Taskforce by the Minister of Economic Affairs and Climate Policy.

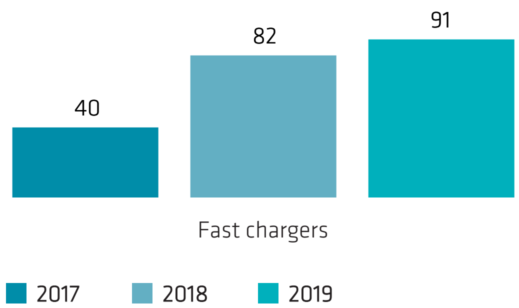
Mobility

Electric transport is growing fast. In 2019, we installed 4,961 regular charging points and 91 fast chargers for electric cars. We expect these numbers to increase further in the coming years. By 2025, 1 million electric vehicles (cars, lorries and buses) are expected to be in use in the Netherlands, and around 2 million by 2030. In October 2019, the 500th electric bus was taken into service and 10% of all buses are now battery-powered. Bus companies must have switched to zero emissions before 2030.

Growth number of regular charging points



Growth fast charging points



ElaadNL celebrates 10th anniversary

Together with the other Dutch grid managers, Stedin is an affiliated organisation of ElaadNL: the knowledge and innovation centre in the field of smart charging infra-structure for electric cars in the Netherlands. Several of our employees have been seconded to ElaadNL, where they work on providing a joint answer to the question of how we can charge millions of electric cars effortlessly and sustainably in the future within the constraints of the grid. The centre celebrated its 10th anniversary in September: a milestone.

Zero-emission bus transport closer to realisation

The number of electric buses in public transport is rapidly increasing. The 500th electric bus took to the road in October 2019, easily breaking the 10% mark for the total fleet. Their number is growing in Stedin's service area as well. In 2019, 37 electric buses were added in Dordrecht, 23 in Zoetermeer and the same number in Delft, while RET and Utrecht each added a further 55 electric buses to their fleet at the end of the year, for example. This growth presents the grid managers with a set of particular challenges. As a result, ElaadNL is strongly in favour of getting grid managers around the table as early as possible, even before the invitation to tender is issued. A better approach is being developed together with contracting authorities, which has a major focus on the timely connection and efficient utilisation of electricity grids. With three quarters of all the buses in public transport expected to be electric by 2025, the urgency is great. Several important topics are therefore set to be addressed in 2020, including the National Agenda on the Charging Infrastructure Network and the energy supply around public transport hubs.

Transition together/Innovation:
Smart Solar Charging

A sustainable energy system at the district level: as part of the Stedin innovation project 'Smart Solar Charging', we store locally generated solar energy in shared or other cars using a smart, dynamic fast-charging and storage system (Vehicle2Grid). The car then becomes part of the energy system. This process creates flexible storage capacity that helps to reduce peaks on the electricity grid. The locally generated energy is released to the district at a later moment, when the demand and price are both high. This system is also known as 'bidirectional'.

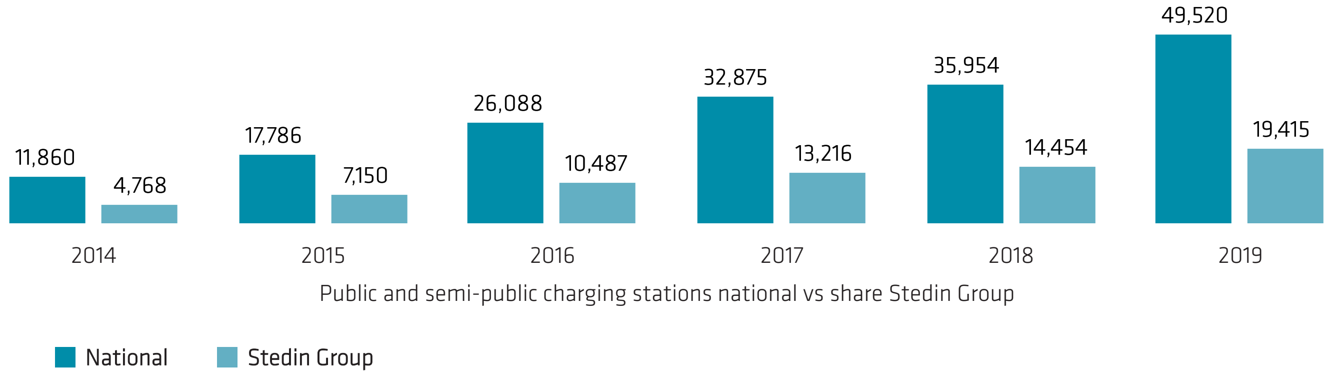
2019 was a year of scaling up. On 21 March 2019, King Willem-Alexander unveiled the world première of this sustainable energy and mobility system in the test bed within the Utrecht residential district of Lombok. In addition, Triodos Bank is currently building the world's largest bidirectional charging square in Zeist. The municipality of Utrecht also worked on the development of a bidirectional city network comprising 145 roadside charging stations.

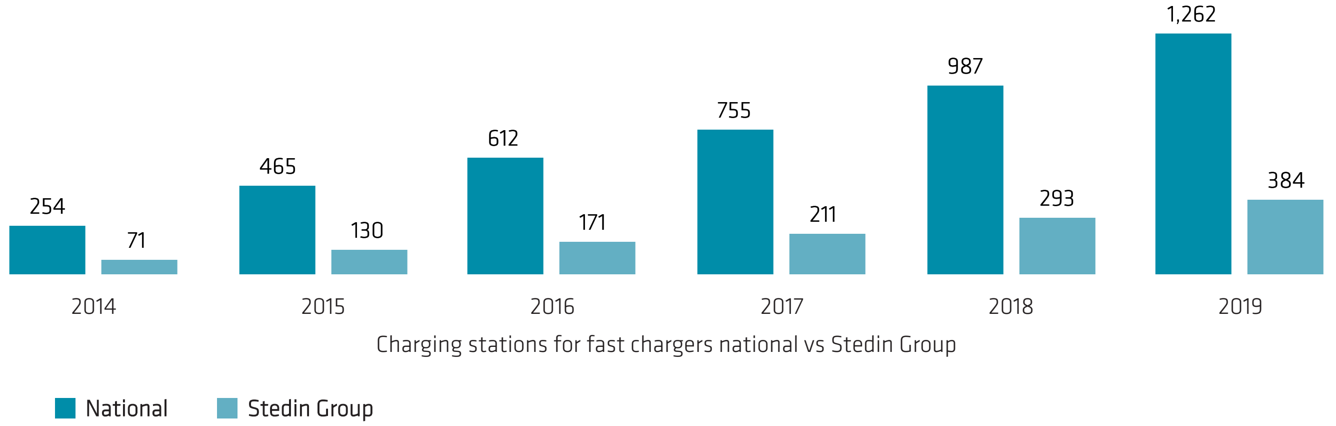
National Agenda on the Charging Infrastructure Network

The National Agenda on the Charging Infrastructure Network lends visibility to the challenge that we face: to install 1.8 million charging points by 2030. At the moment, there are approximately 50,000 charging points in the Netherlands. The National Agenda focuses on a regional approach. Stedin is set to be an important partner in drawing up the regional plans in our coverage area. As a result, achieving a balanced load of the energy network is always taken into account. The National Agenda specifically includes a passage on the roll-out of private charging infrastructure. This point follows the basic principle that unambiguous agreements need to be made on precisely how semi-public and private charging infrastructure (for instance, on business parks and in multi-storey car parks) contribute to the public charging requirement.

Growth of number of charging stations in our area

In 2019 Stedin Group has a 39% national share in the number of public and semi-public charging stations and a 30% national share in the number of fast chargers.





Local smart grid at grounds of ADO Den Haag football club

Stedin and Scholt Energy have jointly realised a local smart grid at the stadium of ADO Den Haag football club. The stadium has an unusual grid load pattern, with a significant peak on match days alternated with a relatively low load between home games. In addition, the stadium has a sizeable solar roof capable of generating 700 kWp on sunny summer days, which can result in a significant peak. It also has 30 charging points for electric cars, which the municipality of The Hague prefers to power with the solar energy that is generated.

Scholt Energy installed a battery with a capacity of more than 750 kWh at the stadium, supplied by Alfen. Alfen also provided the smart grid technology and is in smart control of the charge stations. While the battery is used to help power the stadium on match days, it is used by Scholt for commercial purposes on other days. Stedin tracks the energy flows using a sophisticated measuring system. In this way, we make transparent how the varying interests of different stakeholders at an event location translate to grid load.

Agriculture and land use

While Stedin's service area is densely populated, there are still sufficient areas that can be categorised as agriculture and land use. These areas require a dedicated approach, since they often have to cope with periods of peak load. Coordinated action is essential here as well.

Flexible energy consumption in Zuidplaspolder

Demand for electricity in Zuidplaspolder has increased significantly in recent years. Stedin's electricity grid is slowly reaching the limit of its capacity as a result. To ensure that we can supply new businesses and new housing developments in this area with electricity in the future, we are expanding the capacity of the grid. A new transformer station will be built in Zuidplaspolder between 2023 and 2025. To ensure that the maximum grid capacity is not reached in the meantime, Stedin is looking for market parties that can help local businesses to be flexible in their energy consumption, in return for payment. The idea is to spread out the peak load on the electricity grid during the day, thereby preventing grid overload. In August 2019, a tender was launched for the flexibility market within Stedin's grid area.

Transition together

Successful launch of GOPACS

Grid managers TenneT, Stedin, Liander, Enexis Group, Rendo, Enduris and Westland Infra are jointly developing the GOPACS energy market platform. It is an important step to reduce capacity shortages, i.e. congestion, in the electricity grid and hence contribute to ensuring the continued reliability as well as affordability of the Dutch electricity grid. Following a pilot in 2018, the first transactions were conducted this year. They were successful in solving congestion issues. The intention is to expand the platform further in 2020 with more trading markets so as to increase the available flexibility. In Stedin's area of operations, commercial growers form the main group of initial customers providing flexibility through GOPACS.

'Tom Meewisse: Transitioning together with Stedin is a requirement to enable flexible energy trade in the future.'

Director of Meewisse Roses Tom Meewisse is transitioning together with his account manager at Stedin, Jacqueline Fernandes-van Lit.

Electricity

In 2019, flexibility and congestion management were established as important building blocks for implementing the Climate Agreement. The rapid emergence of renewable energy sources has led to bottlenecks in the electricity grids at various places within the Netherlands.

Future-proof grids

In 2019, much attention was paid in the press and in the House of Representatives to a suddenly emerging shortage of transmission and distribution capacity, potentially endangering our success in achieving the climate objectives. We were already aware of this issue for some time. The grid managers in the Netherlands are working together on solutions to this issue, with a focus on speeding up grid construction. Particular consideration is also given to possibilities for matching electricity supply and demand more smartly as well as for further testing the technical limits , to ensure that bottlenecks cannot arise or will only develop later. Flexibility is key with this regard. An example is the GOPACS platform referred to previously. In GOPACS, we also learn how to shape the interaction with TenneT, other grid managers and market parties effectively, so as to safeguard a reliable electricity grid going forward.

We see an increase in both private and business customers actively seeking local cooperation with one another as a means of putting their sustainable ambitions into practice. We encourage this trend as a grid manager, since it enables them to help realise a more efficient use of the electricity grid. Increasing automation, changing regulations and adjustment of the netting arrangement for owners of solar panels are creating new opportunities for accelerating this development.

Regional Energy Strategy (RES)

The commitments in the Climate Agreement relating to electricity and the built environment require each region to develop a regional energy strategy, or RES. During 2019, Stedin was actively represented in nine RES regions where we are the largest grid manager as well as in a further five regions where other grid managers are responsible for the major part of the electricity and gas grids. Together with the public authorities, businesses, residents and partners, we are exploring the possibilities for the regional generation of sustainable energy, for instance; mainly from wind and solar parks. With regionally oriented teams, each RES region has its own area director and account managers provided by Stedin who are responsible for the results in their area. To facilitate this process, we created opportunity maps for each RES region. The opportunity maps show where there is still sufficient capacity for solar and wind farms on the current electricity grid in the short and longer term. These opportunity maps have already been successfully used in several RES regions. The proactive approach will be continued in 2020 with the aim of creating an RES 1.0 (a draft RES) for each region.

Transition together

Province of Zeeland records a first: Draft RES passes national 'impact test'

Zeeland was the first province in the Netherlands to develop a draft Regional Energy Strategy (RES). In August 2019, the RES was tested for content and process by experts from various national organisations as well as public authorities. Through this so-called 'impact test', in which Enduris was closely involved, the energy strategy of Zeeland was tested against the national framework.

Zeeland was given the opportunity to explain the draft RES in terms of content as well as process. Among others, representatives from the RES National Programme, the Ministry of the Interior as well as and the Ministry of Economic Affairs and Climate Policy took part in focus groups. The province was complimented on the speed and meticulousness of the process, which are unmatched by any other region. The national representatives were impressed by the quality of the work that they were asked to assess. There was also much praise for the process: the early involvement of the grid manager and the many stakeholders who were able to make a contribution through the sector platforms.

Making network information available

Digitalisation and data management

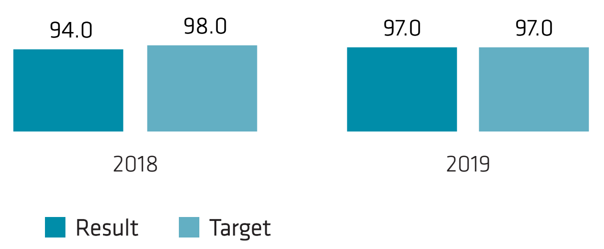
Data are crucial to ensure that our grids remain manageable during the energy transition. In 2019, we worked hard to develop several products that help us make data more quickly and easily available. Two products that stand out are Data Warehouse and Datalake 2.0. Datalake 2.0 gathers raw data from our assets and systems. The system has been delivered but is not yet operational. It awaits the input of data, which is scheduled to take place in early 2020. Data Warehouse puts the data in context and makes them 'readable', so they are usable by analysts and others in the organisation. We will complete Data Warehouse in 2020.

Next-generation assets

We also welcomed the next generation of smart assets, including the Smart Grid Terminals. Assets such as the Smart Grid Terminal provide comprehensive insight, helping to ensure that the electricity grid remains efficient and reliable in the future. Possibilities are also created for integrating the sustainable and decentralised generation of electricity. They represent a significant expansion of our 'secondary network', i.e. the IT network that 'reads' our primary network. These secondary assets generate data that we need to access safely in order to make them available for use. As a result, the growth of the secondary network has increasing strategic and operational importance.

In 2019, we successfully read out 2,000 Smart Grid Terminals. We plan to transfer the data from the OT domain to the IT domain in the first quarter of 2020. This process will enable us to make broad use of the data from the networks as well as to analyse the data.

Availability of smart meter data (in per cent)



Stedin uses two telecommunication networks to read out smart meter data. Based on the coverage maps of the GPRS and CDMA networks, Stedin decides which communication technology to use at a particular location for the smart meter. A significant number of smart meters were nonetheless unsuccessful in establishing a link with the transmitter, as a result of which data were not received – or not always received – from the meter concerned. In early 2019, a prediction model was developed that determines which communication technology has the greatest likelihood of success at a particular location. This model increases the probability of the right meter being installed the first time. In addition to a better score, this process also leads to several thousands of euros in cost savings. Adjustments in the read-out process have also led to significant improvements.

Using available network information for the energy transition

The available data provide us with insight into the grids, which helps us to manage congestion better. In 2018, we started quantifying all 17,000 low-voltage grids. Quantifying grids provides an up-to-date view of the grids on an automated basis. This model enables us to save hundreds of hours of drawing work. In 2019, we successfully extended quantifying grids to our medium-voltage grids, allowing us to map our entire grid. We have now mapped 90% of the low-voltage grid.

Digitalising the grids and structuring data management are also high on the list of priorities. In practice, this process proves to be complex mainly in relation to IT. We aim to make considerable advances with this regard in 2020. For 2020, this data-driven ambition is set out in the 'System Operator' initiative.

Data analytics & quantifying grids

Significant advances were also made to increase knowledge and make new systems usable for the organisation; for instance, by using data analytics. Based on this approach, we can make smart investment choices. Part of the products are now available for use. New grid quantification tools, for example, will allow us to prepare future grid scenarios within

Transition together

LEF in Hoog Dalem district of Gorinchem

In 2019, we launched the LEF concept in collaboration with our partners ABB, i.LECO and Energy21. LEF stands for Local, Energy and Flexible. We are testing this concept for local electricity production and consumption in the residential district of Hoog Dalem in Gorinchem. The 15 residents taking part in the pilot can see how much electricity they are producing and consuming on their block chain-enabled application. They also see how much energy they have traded with neighbours, which they are therefore justified in claiming to be locally generated sustainable energy. A second pilot on the LEF Greenparc Bleiswijk business park will go live in 2020.

a few hours and will shortly provide information on the quality of a specific grid. In the past, this process often took up to several weeks and the result was less accurate. This way, we can quickly decide whether cables need to be shortened, or whether a transformer needs to be added or configured differently. These future scenarios help us to make effective investments. We also provide opportunity maps for the RES and project developers, among others, showing where there is scope and capacity for sustainable initiatives such as solar farms. This approach also helps us to prevent congestion.

Data management

Every day, we use existing data and store new data: when working on the grid, serving customers, working with contractors and preparing reports. Incorrect or wrongly entered data cause us problems. We are working to improve data management so we can base our eventual decisions on the right data and help our customers effectively the first time. In 2019, we focused on making data locatable, accessible and reliable. We defined a clear standard for data processes and toolings were made available for this purpose.

Set of agreements on data-sharing

The energy transition will also require us to share more data with more market parties than is presently the case. New EU legislation (Clean Energy Package), the government's vision for a data economy as well as the vision of the Netherlands Authority for Consumers and Markets (ACM) on governance in relation to data-sharing in the energy sector have led to an initiative of the Dutch grid managers. In 2019, they were among the first in Europe to develop a 'set of agreements on data-sharing'. Intensive contact with relevant market parties, the Ministry of Economic Affairs and Climate Policy, the ACM as well as the Dutch Data Protection Authority resulted in agreement being reached on this matter with all the parties at the end of 2019. The set of agreements is in line with EU data legislation that is expected to be introduced in the coming years. In this endeavour, the Netherlands is leading the way. The agreements will be implemented in 2020 and 2021.

> ‘Mark Elbers, Programme Manager for the Overvecht-Noord natural gas-free project: Transitioning together means cooperating as well as connecting parts of the solution.’

Natural Gas-free Project Manager Leendert Odijk (on the left) and Overvecht-Noord Natural Gas-free Programme Manager Mark Elbers (on the right) are transitioning together with Robert Schenkel, Key Account Manager at Stedin (centre). 'We are designing the future energy infrastructure of the Overvecht-Noord district in Utrecht without the use of natural gas. Along with residents and other parties involved, we will implement an affordable and sustainable plan, in which all interests have been properly weighed.'

‘The Climate Agreement is a prime example of transitioning together. People from all regions and sectors have contributed to its formulation as well as its creation.’

3. Sustainable business operations

Transitioning together is always at the forefront when we talk about sustainable business operations. We can only ensure safe working practices jointly; professionally competent employees are essential to creating a strong company together. With our One Planet approach, we take concerted action together to lower our environmental impact.

Safety and security

Working with electricity and gas involves certain risks. These risks may affect the safety of not just our own employees but also our externally hired staff, employees of supply chain partners that carry out work for us and, of course, our customers. Together, we ensure a safe infrastructure for gas and electricity. Cooperation between all of us is essential to achieving the safest result.

Safety measures

We make sure that our employees receive safety training, we use high-quality equipment and we make personal protective equipment available. We link quality and safety to attitude and conduct. In November, we presented the Golden Safety Shoe to employees who had demonstrated exceptional safety performance in the previous year.

Safety in the supply chain

We also involve our principal partners within the energy supply chain in our efforts to link quality and safety to attitude and conduct. We visit work locations, audit their management systems and assess their instructions framework in accordance with the BEI and VIAG. We hold quarterly meetings on quality and safety, during which incidents and workplace accidents are also discussed. Safety issues and policy are on the agenda of an annual executive review as well.

'In June, we awarded the Stedin Safety Award for the second time. This year's winner was BAM Infra Energie & Water West B.V.'

Preventing workplace accidents

We make great efforts to work as safety as possible and prevent workplace accidents. We define workplace or occupational accidents as lost-time incidents, with alternative work or medical treatment required. Unfortunately, we failed to achieve our target for 2019, which was a maximum number of 34 accidents. We eventually recorded 39 such accidents.

Type of accidents for Stedin Group	2017	2018	2019
Number of fatal accidents	0	0	0
Number of lost-time injuries (lost-time > 1 day, LTI)	37	24	17
Number of accidents entailing alternative work (RWC)	5	8	11
Number of accidents without lost time requiring medical treatment (MTC)	7	8	11
Total	49	40	39

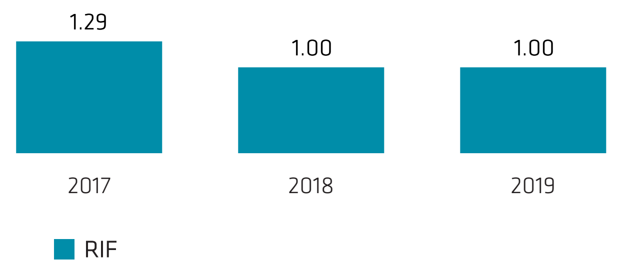
We monitor our safety performance on the basis of two ratios:

RIF = Recordable Incident Frequency; the number of lost-time workplace incidents, incidents entailing alternative work or incidents requiring medical treatment per 200,000 hours worked;

LTIR = Lost Time Injury Rate; the number of lost-time workplace incidents per million hours worked.

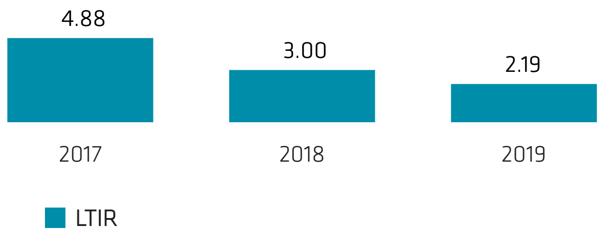
RIF

The recorded RIF was 1.00, while the target was a maximum of 0.90.



LTIR

The recorded LTIR was 2.19, while the target was a maximum of 1.95.



For 2020, we intend to maintain the targets from 2019, while we will do all that we can to achieve the RIF and LTIR targets.

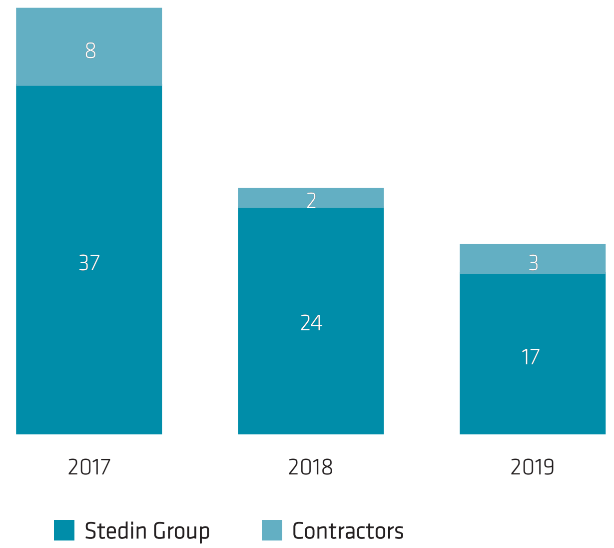
Looking at the causes of the workplace accidents, we see that a large part of them are directly related to work, such as contact with electrical voltage or cuts. Many others are attributable to falls, stumbling and traffic accidents. The fact that we are carrying out the large-scale meter replacement programme ourselves has led to a substantial number level of traffic movements. We are therefore implementing a traffic programme in 2020 with the aim of reducing the number of traffic-related accidents in particular.

The following table shows the causes of lost-time injuries.

Cause of LTIR	2017	2018	2019
At work	1.71	1.25	0.77
Falling, stumbling, slipping	1.98	1.00	0.52
Participation in traffic	1.19	0.75	0.90
Total LTIR	4.88	3.00	2.19

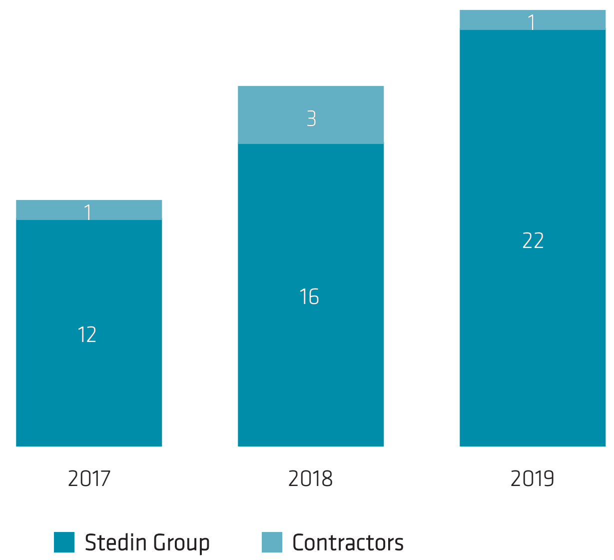
Lost-time workplace incidents

The following chart shows the number of lost-time *workplace* incidents for Stedin Group and its contractors. The last three years show a downward trend. We believe that this trend can be largely attributed to our efforts of raising safety awareness in the organisation, including our contractors (see below for more details). In addition, we did more to provide temporary alternative work.



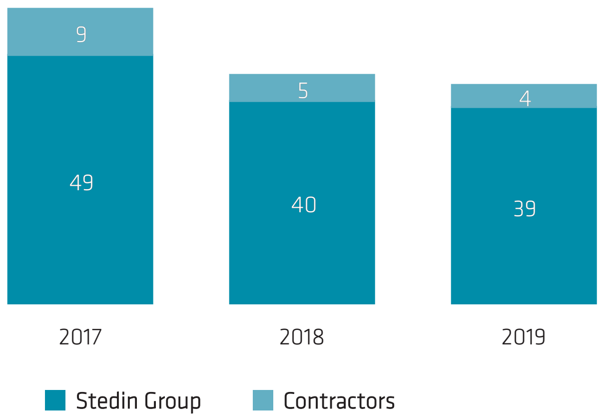
Workplace incidents without lost time

The following chart shows the number of workplace incidents *without* lost time for Stedin Group and its contractors. The last three years show an upward trend. This trend is due to an increase in the number of incidents after which the employee concerned temporarily performs restricted or adjusted work (RWC) and an increase in the number of incidents requiring medical treatment. The employee in question continues to work and there is no sickness absence (MTC).



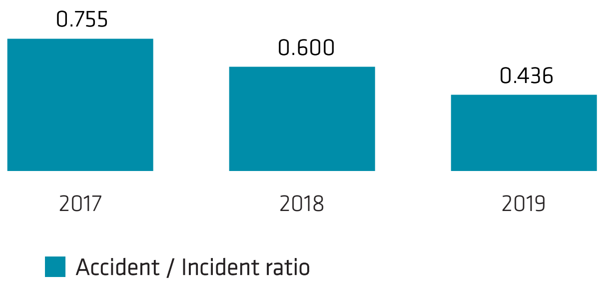
Total number of workplace incidents

The following chart shows the *total number of workplace incidents* as the sum of the number of *lost-time workplace incidents* and *incidents* without lost time for Stedin Group as well as its contractors.



Accident / incident ratio

The following chart shows the *accident / incident ratio* for Stedin Group, which is the ratio between the number of lost-time *injuries* and the *number of workplace incidents*. The last three years show a downward trend.



Safety awareness

The entire Stedin Netbeheer organisation obtained certification for level 3 of the Safety Culture Ladder in the third quarter of 2019. This standard assesses safety awareness (attitude, behaviour and culture). In the fourth quarter, the Meter Cabinet & Connection department was nominated for level 4 of the Safety Culture Ladder following a successful audit. In order to raise safety awareness on a lasting basis, we employ a multi-year safety programme HRO (High Reliability Organisation).

HRO has five key features:

- I think ahead
- I am not afraid to ask and keep asking questions
- I am prepared for the unexpected
- I focus on solutions
- I am open to the expertise of colleagues

In 2020, we will start with the third phase of HRO: Embedding routines. We aim to be certified for level 4 of the Safety Culture Ladder by 2021 at the latest.

Health and environment

We developed an HRO module for the environment and began to roll it out in 2019. This module is scheduled to be completed by the end of 2020. The environmental workshops are designed to broaden employees' operating knowledge, teaching them to recognise, prevent and correct environmental issues. We also responded satisfactorily to legislation and regulations on hazardous substances or pollutants, which present risks to health in addition to the environment.

Crisis management organisation

Safety is also a key element in the continuity of our day-to-day operations. Our crisis management organisation prepares for new and unexpected crisis situations. We published the updated Stedin Crisis Management Plan (CMP) in mid-2019. The updated CMP also includes a different approach to Exercising, Training and Education (ETE) for our crisis managers. Initial steps towards adopting a customised approach as well as the individual training and development of our own employees were taken in 2019. Preparation for incidents as well as cooperation with the emergency services, fire service and security region continue to be at the forefront. Fast and effective intervention in case of incidents or outage, with safety and security in public spaces as a priority, remains an area for attention.

Energy transition

The energy transition is having an increasing impact due to the accelerating pace of enhancing the sustainability of energy systems and the increase in alternative energy sources, such as wind as well as solar energy, biogas and hydrogen. Using different energy carriers and the associated new technologies poses a challenge. Anticipation of these developments in time is essential for guaranteeing safety into the future as well.

Road traffic safety

Overall, there has been a slight increase in the number of reports of unsafe situations. These mainly concern driving behaviour. This is attributable to the fact that, mainly due to work relating to smart meters, there are more traffic movements and more external reports are received about these.

Security

Preventive as well as repressive measures were taken to address the issue of security in the reporting year. The focus was on combating fraud, theft of materials, the security of assets and growing levels of aggression. In several instances, there was close cooperation with police and security networks.

Cybersecurity

Large-scale digitalisation of the electricity gridas a result of the energy transition is accompanied by increased cybersecurity risks. Outside our company, new or current vulnerabilities in the field of cybersecurity are already being exploited by malicious parties, occasionally leading to significant loss or damage. This fact is acknowledged in laws and regulations. As a result, Stedin has been designated a 'vital service provider' pursuant to the Network and Information Systems Security Act, under the supervision of the Radiocommunications Agency Netherlands.

Cybersecurity is addressed at the strategic as well as the tactical/operational level within Stedin. Stedin applies internationally recognised standards in order to reduce its vulnerabilities to outside threats, with a focus on prevention, timely detection and the resulting actions. As Stedin bases its cybersecurity on the tried and tested Deming cycle for continuous quality improvement, it arranges to be regularly tested by external specialised parties.

In the field of cybersecurity, Stedin works closely with other organisations in the private and public sector, including the Cyber Security Council (of which CEO Marc van der Linden is a member), the Vital Infrastructure Committee of VNO/NCW, industry association Netbeheer Nederland and the National Cyber Security Centre. Stedin shares information with these organisations on threats and measures, while it also collaborates with them to develop standards and provide mutual support in case of a materialised threat.

Charters and principles

In 2019, Stedin Group endorsed the following external economic, environmental and social charters or principles.

Stedin Group certificates

Stedin Netbeheer	Enduris	DNWG Infra
ISO 9001	ISO 9001	ISO 9001
NTA 8120	NTA 8120	ISO 14001
ISO 55001	ISO 55001	CKB
VCA**	ISO 27001	VCA**
Veiligheidsladder, trede 3		Veiligheidsladder, trede 3
Veiligheidsladder, trede 4 (afd: M&A)		ISO 27001, Multimedia
ISO 27001 (afd: Hoogspanning)		ISO 27001, TUMS

Professionally competent employees now and in the future

Professionally competent employees are key to achieving our objective of transitioning together. They ensure that we can function smoothly as an organisation and that we establish strong relationships with the world beyond our company. In 2019, we laid the foundation for data-driven HR. This approach helps us to make the right decisions about personnel based on thorough and proper analysis.

Professionally competent employees & using data

Strategic Personnel Plan
We used the Strategic Personnel Plan to map which specific needs we anticipate for the coming years in terms of capacity and competences. This overview is helpful in providing us with a basis for future managing and planning. We have better insight into the precise needs for technical personnel and are better able to prepare accordingly. In the short term, we can see that there is no risk of acute staff shortages, partly because we have taken on permanent staff for large projects (such as the smart meter roll-out) rather than relying on a flexible supply of workers. We are seeing the benefits of this strategy now. Our in-house training school also enables a flexible response to the evolving need for technical personnel. The in-house training school additionally helps in redeploying technical personnel through retraining.

Labour market campaign launched: Plenty to do

In the summer, we launched our labour market campaign 'Plenty to do'. This campaign shows how we contribute to the energy transition and which role a prospective employee can fulfil in that endeavour. The campaign also showcases Stedin's appeal as an employer and is accompanied by a new Working at Stedin site.

Performance management
We professionalised our performance management in 2019. In terms of data, we started to digitalise our employees' performance. This process allows to see who is ready for a horizontal or vertical move, as well as who is not in a suitable role. We challenge one another and live up to the same standards. Managers discuss employees' performance in an HR review. This review ensures consistency in our appraisal of what is 'good' and where there is 'room for improvement'. We give specific attention to our high-potentials in this regard. This approach allows us to anticipate personnel challenges more effectively and respond appropriately so the critical roles in the organisation always remain properly filled, even when employees leave our company.

Future-oriented personnel and payroll administration
In 2019, we laid the foundation for the further optimisation and structuring of our HR processes. The purpose is to make these processes more personal and accessible for candidates, employees as well as business partners. We will enable digital HR support on every device, any time, anywhere. During 2020, we will press ahead with implementing the new systems. The improved services will become available from 1 January 2021.

Integration of Stedin/DNWG: Stronger together
We are making good progress on planning and preparing for the integration. Working in close consultation with both works councils, we aim to achieve a gradual process of implementation until 2022. The agreements made between both works councils as well as HR departments are already facilitating our efforts to encourage movements of employees between DNWG and Stedin. An example is the start that we have made on opening up mutual vacancies. In this way, we are already maximising integration in the field of human resources, ensuring that integration is achieved with as few staffing consequences as possible.

Stedin and DNWG actively work together on many fronts to share knowledge as well as experiences and to exploit synergy gains. Examples are joint investments in digitalisation, the energy transition, technological innovations and excellent services. We are convinced that this approach helps us to be better prepared for the future together.

Agile organisation

We train our leaders of the future and teach them to cope with an ever-changing environment. As we recognise that the development of our employees is crucial, we want to learn from changes and act quickly as well as effectively in new situations. To this end, we continuously invest in these aspects. We do so through personal development, leadership and the support of our in-house training school.

Personal development
Both employees and their managers are in constant dialogue about performance, behaviour as well as development. Employees are encouraged to be keen learners and to seek out opportunities for personal development. Stedin uses

various tools to support talent development, including assessments, 360-degree feedback and Stedin Business coaches from our coaching pool. Development agreements and initiatives are discussed as well as recorded. We use HR analytics to analyse an increasing amount of data in order to examine the effectiveness of the development and training tools that are deployed. Individual programmes are also evaluated, developed further or adapted, such as the training and education provided by our in-house training school as well as the NCOI training institute.

Leadership programmes

In 2018, we started a broad range of leadership programmes, which we continued in 2019. The leadership programmes centre on cohesive leadership. Important elements in these programmes are cooperation throughout the entire organisation, proper dialogue and encouraging a feedback culture. Specific attention is paid to the employees' learning ability in each of the programmes. For Stedin to be an agile organisation, it is important that our employees are able to learn from change and act quickly as well as effectively in new situations. The current activities/programmes are:

- *strategy kick-start and kick-forward days*. These days allow all our managers to acquire knowledge about the strategic developments and translate them to their own teams;
- *'Toekomstmakers' (Makers of the Future) Traineeship*, which is a two-year traineeship programme for talented new employees with the aim of training them to become 'leaders of the future';
- *high-potential programme,* a 10-month programme to assist talented employees within our organisation in accelerating their personal and professional development;
- *Process Improvement (PI) programme*. We appoint a new group of PI leaders every two years. During this period, they work on improving processes, while being trained as 'black belts' in the Lean method;
- *Basic Cohesive Leadership*, an eight-month programme for new managers;
- *LAB*, an eight-month Management Development programme. The programme focuses on individual and collective leadership development to make choices and speed up the energy transition together with others;
- *Horizon*, a 10-month executive programme**.** The aim of this programme is to develop our strategic executives for achieving our mission of 'working together to create an environment filled with new energy'.

In-house training school

We trained around 350 pupils as fitters in our in-house training school in 2019. By training people ourselves, we ensure that we still have a substantial influx of new technically trained colleagues, even in these years of a shortage of technical staff. The in-house training school offers senior secondary vocational (MBO) level and other training programmes in our fields of expertise, and also provides the mandatory safety training. The in-house training school recorded approximately 30,000 applications in 2019 for technical training, safety training such as BEI and VIAG, and in-house safety training.

Our in-house training school awarded no fewer than 169 MBO diplomas in 2019. Richard Moti, Rotterdam city councillor, presented the diplomas in person.

Training smart meter fitters

We made a start in 2015 on training people coming from other professions to become smart meter fitters. Since then, the in-house training school has retrained over 380 people, 175 of whom were previously unemployed on a long-term basis. In 2019, 24 smart meter mechanics moved on to operational departments within Stedin.

Inhouse training school	2017	2018	2019
Trained as fitters	279	300	350
Number of training programmes followed	33,509	27,411	30,000
Number of MBO diplomas awarded	89	73	169
Technology & Safety training budget	€ 8,2 million	€ 10 million	€ 11 million
People coming from other professions trained as smart meter fitters	88	82	51

Special projects within the in-house training school in 2019

The in-house training school is responding to two trends: new forms of learning and changing education. Many projects from 2019 are connected with these trends:

- In the spring, the in-house training school started a pilot project for 16-year-olds. Twenty young technicians have since joined the project.
- A second training school was built to meet the growing demand for switching training. The training programmes are tailored specifically for switching in the low-voltage network.

- In collaboration with DNWG, an MBO energy transition programme was developed at level 4.
- We also joined several national partners to develop a part-time HBO Energy Technology Associate Degree programme.
- In 2019, the in-house training school started a pilot project to provide continuing education for gas fitters. The aim is to ensure that the technicians' knowledge is continuously updated. At the moment, one training day is scheduled every three years. The objective is now to roll out this form of learning for all Gas & Electric technicians after the completion of the pilot phase.
- In the field of safety, the in-house training school continued to play a role in the further development towards a High Reliability Organisation (HRO) in 2019. This course is standard for every new Stedin employee.

Stedin in-house training school: best work placement and training company in the province of South Holland in 2019

In 2019, our in-house training school was voted the best work placement and training company in the province of South Holland, while it also hosted a working visit by Minister of Social Affairs and Employment Wouter Koolmees. The enormous volumes and the diversity of target groups as well as study programmes make the Stedin in-house training school one of the largest and most innovative in-house training schools in the Netherlands.

Inclusive society

Contributing to an inclusive society is an element of our One Planet strategy. Stedin Group is committed to working for equal opportunities and long-term employability for all. We want our workforce to reflect today's society, feel welcome and be treated equally, regardless of age, sex, religious beliefs, sexual orientation, background, level of education or disability. Stedin prohibits and does not tolerate discrimination. To this end, Stedin enforces its code of conduct and guidelines, which lay down the standards and values that we have agreed with one another. They affirm the basic principle that we respect and value each other, with the understanding that everyone is equal. Our managers ensure that all employees are familiar with the code of conduct and guidelines, and that they are observed. Stedin has set up a Security & Integrity reporting centre, where everyone employed by Stedin can report actual or suspected instances of non-ethical behaviour. Incidents involving integrity violations (which also cover discrimination) can be reported anonymously to a confidential adviser. Reporting and accountability take place regularly based on anonymity.

The code of conduct and guidelines (including non-discrimination) are also the starting point for HR processes, such as recruitment, selection, promotion, remuneration and training. HR information is generally accessible and can be viewed by Stedin employees on our Intranet. If an employee is uncertain about the application of any policy, they can obtain further information and assistance from an HR professional. Where an employee disagrees with a decision, they can lodge an objection. Objections can also be filed with the Security & Integrity reporting centre.

By providing work placements, taking on employees with an occupational disability and training residence permit holders, people coming from other professions as well as people aged 55 or older, we are creating greater diversity within Stedin Group and implementing our goal of contributing to an inclusive society in practice.

Work placement posts

We helped 122 young people to acquire relevant work experience by means of work placements. In addition, employees regularly give guest lessons on sustainable energy at schools in our coverage area and we are a partner of the JINC initiative in which young people are helped on their way to finding work. Jointly with other organisations, we combat energy poverty; for instance, through our partnership with Energy Bank Rotterdam.

Number of work placement posts	2017	2018	2019
Target for 2019 > 1% of workforce (achieved: 2,4%)	96*	109	122

* Excl. DNWG

Participation Act and Service Team Operations
Stedin Group aims to employ 100 people with an occupational disability (in accordance with the definition in the Participation Act) by 2020. The Service Team Operations was established in 2019. In this team, young people with an occupational disability are trained as assistant fitters. Many of these youngsters come to us from secondary vocational education. In order to work as an assistant fitter for Stedin, they need to obtain several safety certificates. We adapted the training material to present a practical focus for this group and we gave the work supervisors a role in passing on the knowledge to them. The results are very promising: all the candidates from the first group passed the first exam in one go. At the end of 2019, 17 people with an occupational disability worked for the Service Team Operations. In 2020, we will expand this group to 40 candidates in 2020.

We created jobs for people with an occupational disability elsewhere in our organisation as well, but the number of places created still fell short of our target in 2019 (see table below). However, the launch of the Service Team Operations ensures that this figure is on the rise.

KPIs for Participation Act - Employees with an occupational disability	2017	2018	2019
Target	12.3	84.0	90.2
Actual vacancies at year-end 2019	8.0	2.0	10.0
Filled as at 31 December 2019	8.1	19.0	43.4
Started but left	6.4	1.0	8.0

Training residence permit holders
In 2019, a second group of refugees with residence permits started on a work-study programme at Stedin. The group of candidates, all of whom have a technical background, started on a preliminary programme. We strongly focus in the preliminary programme on Dutch language and technical language skills. The group again received help with Dutch from language buddies this time. Stedin colleagues practise weekly with a residence permit holder or discuss the curriculum. In February 2020, the candidates who successfully complete the preliminary programme will progress to the training programme in order to qualify as first maintenance technician for low and medium voltage (level 3) at our in-house training school. The target was to have 10 residence permit holders start on a work-study programme each year. In 2019, the group consisted of 8 residence permit holders instead of 10 to ensure that everyone could be given sufficient personal attention and support. A residence permit holder additionally started in the Service Team Operations, bringing the total to 9.

Influx of residence permit holders in training	2018	2019
Target	10	10
Actual	10	9

Stedin, the UAF (foundation for refugee students), the Werk en Vakmanschap national alliance and the municipality of Rotterdam cooperated on creating this project.

Employee motivation
Each September, Effectory carries out a motivation survey among employees who have been working for Stedin for longer than two months. The response rate in 2019 once again rose compared with 2018. Our performance was ranked as equal or better by our employees in all the areas surveyed. The greatest point of pride that is mentioned by all Stedin colleagues remains the working atmosphere. Cooperation between the various departments is the main area for improvement. Stedin applies two KPIs: commitment and engagement, and scores higher than or on-target for both of them.

Commitment / Engagement	Target for 2019	2017	2018	2019
Commitment	7.5	7.4	7.5	7.5
Engagement	7.7	7.7	7.8	7.8

Long-term employability
Long-term employability received a lot of attention in 2019. We want to encourage employees at work to preserve their vitality. At the same time, we offer support to employees on sick leave in recovering and returning to work.

Employee vitality
We provide employees with a package of services, training programmes and courses to increase their employability. Employees can quickly arrange an appointment with care providers who help to prevent work-related complaints such as RSI, back problems and stress, or questions about their workplace.

A Preventive Medical Examination (PME) pilot project was launched in 2019. The PME analyses an individual's health and vitality, enabling them to take timely action where necessary. We made the PME available to specific groups of our operational staff, such as on-call and emergency repair workers aged over 55. Of these groups, 59% took up the offer of the examination. Based on the results, which we expect in the first quarter of 2020, we will decide what steps we can take to enhance the vitality of this group and what the employees in this group can do themselves.

Sickness absence decreased

Data also help us when it comes to sickness absence. By operating on a more data-driven basis, we can analyse more quickly where the greatest issues are and take appropriate action in response. We also started working with a new working conditions service on 1 January 2019. In contrast with the previous year, our sickness absence rate was below the national average in 2019. We hope to continue this downward trend in the coming period.

Sickness absence

Our sickness absence edged down slightly compared with 2018.

Sickness absence	2017	2018	2019
Average sickness absence in the industry and energy sector (second quarter of 2019)	4.6%	4.5%	4.9%
Sickness absence within Stedin Group	5.2%	5.0%	4.8%
Reporting frequency	1.0	1.1	1.1

Collective Labour Agreement for Grid Operators

In 2018, we reached agreement on the new collective labour agreement for the period from 1 May 2018 to 1 May 2021. We elaborated this agreement further in 2019. This elaboration resulted in a fully revised collective labour agreement and collective labour agreement text with effect from 1 January 2020. The text of the new collective labour agreement is intended to show more clearly what value the terms of employment in the collective labour agreement represent, to prove their attraction for all generations of employees and to offer future-proof terms of employment in a sector that is continuously changing. For example, we are introducing a vitality scheme for employees aged 62 years and older. This scheme allows employees to work for 32 hours a week at 90% of their salary, while maintaining full pension accrual rights. A further major change is the new Personal Budget that becomes effective on 1 January 2020. Unlike the 'old' Personal Budget, the new budget percentage is the same for all employees, regardless of their job level or age. Employees also receive 36 hours of accumulated leave a year, to which they can hold on for a maximum of 10 years. The Personal Budget is intended to offer flexibility, leaving the choice of whether it is used for monetary payment and/or leave to the individual employee.

As Stedin values broad employee representation in formulating collective terms of employment, it has laid down this notion in the collective labour agreement. To encourage trade union membership, Stedin made a one-off contribution of € 90 towards the trade union dues for every employee taking out new trade union membership in 2019. We also pay € 16 per year per employee to the combined trade unions.

Flexible work

Stedin Group offers flexible working arrangements.

- Short term: The Collective Labour Agreement for Grid Operators (CAO Netwerkbedrijven), which applies to Stedin, includes standard working hours from 7 a.m. to 9 p.m., Monday to Friday. Employees who do not work according to a fixed schedule or who do not have fixed working hours can arrange their own working hours within the standard window (even varying them daily). In accordance with the Collective Labour Agreement for Grid Operators, employees can purchase additional hours of leave on top of their statutory minimum entitlement from their monthly Benefit Budget.
- The Flexible Working Act allows employees to increase or reduce their contractual working hours as well as to adjust their working hours and workplace. This Act naturally applies to Stedin's employees as well. The vitality scheme previously referred to was also introduced.
- Teleworking: Employees who do not work according to a fixed schedule or who do not have fixed working hours can work on a flexible basis; for instance, choosing to work from home. This arrangement is subject to approval from their manager. Our employees can find further information on our Intranet.

Dependent care and special leave

Stedin does not provide on-site childcare. Employees using childcare receive a payment from the state and choose their own childcare provider. In case of an unforeseen, urgent situation requiring immediate action (e.g. picking up a sick child from school), employees are legally entitled to special leave on full pay (emergency leave or short-term leave of absence) not subject to a limited number of hours.

Moreover, employees are legally entitled to unpaid special leave (parental leave) for children aged up to eight for 26 times their number of weekly working hours. Stedin pays employees 70% of their statutory minimum wage during their parental leave. Employees are also entitled to care leave, during which time they receive 70% of their salary.

Performance bonus abolished

With effect from 2019, Stedin no longer awards a performance bonus and has converted it into fixed salary. Agreement was also reached with the trade unions in 2019 to convert the variable remuneration in the Collective Labour Agreement for Grid Operators and the Stedin company collective labour agreement into fixed payments. We surveyed the employees concerned on this change. In line with the outcome of the survey, these fixed payments were added to the new Personal Budget, so it now totals 24% of the salary.

Irregular work

According to Stedin's standard procedure, new employees are initially offered a 12-month fixed-term contract. Based on a pre-determined 'flow chart', it is decided whether – and, if so, for how long – the contract will be extended. A criterion influencing this decision is whether the position changes significantly within two years. In this case, no contract extension will be offered and no staff will be hired externally in principle. The employee's potential to progress will be taken into consideration with this regard. There is a legal limit on the number of successive temporary contracts that may be offered. The Balanced Labour Market Act (which has come into force on 1 January 2020) limits the number of temporary contracts that may be offered to three, for a total duration of three years, while the period between contracts is not allowed to exceed six months. Flexible use of temporary agency workers is limited as far as possible, depending on the type of work. A conscious decision may be made to use the flexible workforce in order to fulfil a need for temporary, irregular work. This situation may apply to temporary projects, to temporary support (e.g. maternity leave replacement) when specific expertise is momentarily required and to competences that are very scarce (e.g. specialised IT staff).

Departments draw up a staffing plan at the start of the year, in which they indicate how they intend to meet the target for internal and external employees at the departmental level.

In 2019, the ratio of internal to external employees was 15.9%. The target for 2020 is 15.1%.

Other topics

- Stedin is committed to avoiding redundancies. One way we seek to do so is by encouraging internal mobility (advancement). When a vacancy arises, both managers and employees are encouraged to fill the vacancy internally. We have also agreed a preliminary stage of between 6 and 24 months in the new Social Plan. This way, we are investing in 'work-to-work'.
- We have been a self-insurer for the WGA (Return to Work (Partially Disabled Persons) Regulations) and ZW (Sickness Benefits Act) since 1 July 2019. Instead of paying contributions to the Employee Insurance Agency (UWV), we are now responsible ourselves for paying benefits to employees who become incapacitated for work or who are entitled to sickness benefits. We already did so for employees who end up relying on unemployment benefits after leaving the organisation. The assistance to these employees is provided by an external agency. It is important to ensure that the number of people drawing sickness benefits, WGA benefits and unemployment benefits remains low. The Sickness Absence case managers continue to support managers on complex cases and long-term sickness absence.
- There was no major restructuring in 2019 which resulted in significant job losses.
- Stedin's employees are entitled to freedom of association. One examples is the 'Jong Stedin' young professionals network. The sessions that Jong Stedin organises are intended not just for young colleagues but for anyone in our organisation who is young at heart. Jong Stedin is a member of Rot.Jong, a network for young professionals at the 25 largest companies in Rotterdam and Inter Company Association (ICA), a network for young professionals at the 50 leading employers in the Netherlands.

Works Council

In accordance with the Works Councils Act, Stedin has a Works Council that consults with management on a fortnightly basis. The Works Council, the Board of Management and the Supervisory Board additionally conduct tripartite consultations, while the chair of the Works Council takes part in the Strategic Coalition. As the Works Council comprises several different committees, it is well informed of the issues and developments in the organisation.

Employee participation

As the Stedin Group Works Council, our role in 2019 focused on co-creation. In other words, we made an active contribution as far as possible from the start of any process. We fulfilled our role in relation to the following processes in 2019:

Stronger together – DNWG

The Works Council acts in close collaboration with DNWG to explore the differences and potential synergies as a new business unit. Special attention is paid to redundancy and changes of work location.

Sale of Joulz Diensten

Regarding the sale of Joulz, we made sure that the acquiring party is one that views employees as a vital capital asset. This process proved to be successful and we are satisfied with the choice of 3i Infrastructure.

Digitalisation

We gave team leaders and employees at Stedin a voice in relation to digitalisation. We conducted an anonymous survey, in which we asked them specifically which opportunities they saw for the organisation. This survey yielded a number of interesting insights, providing us with a better understanding of what further digitalisation can mean for Stedin.

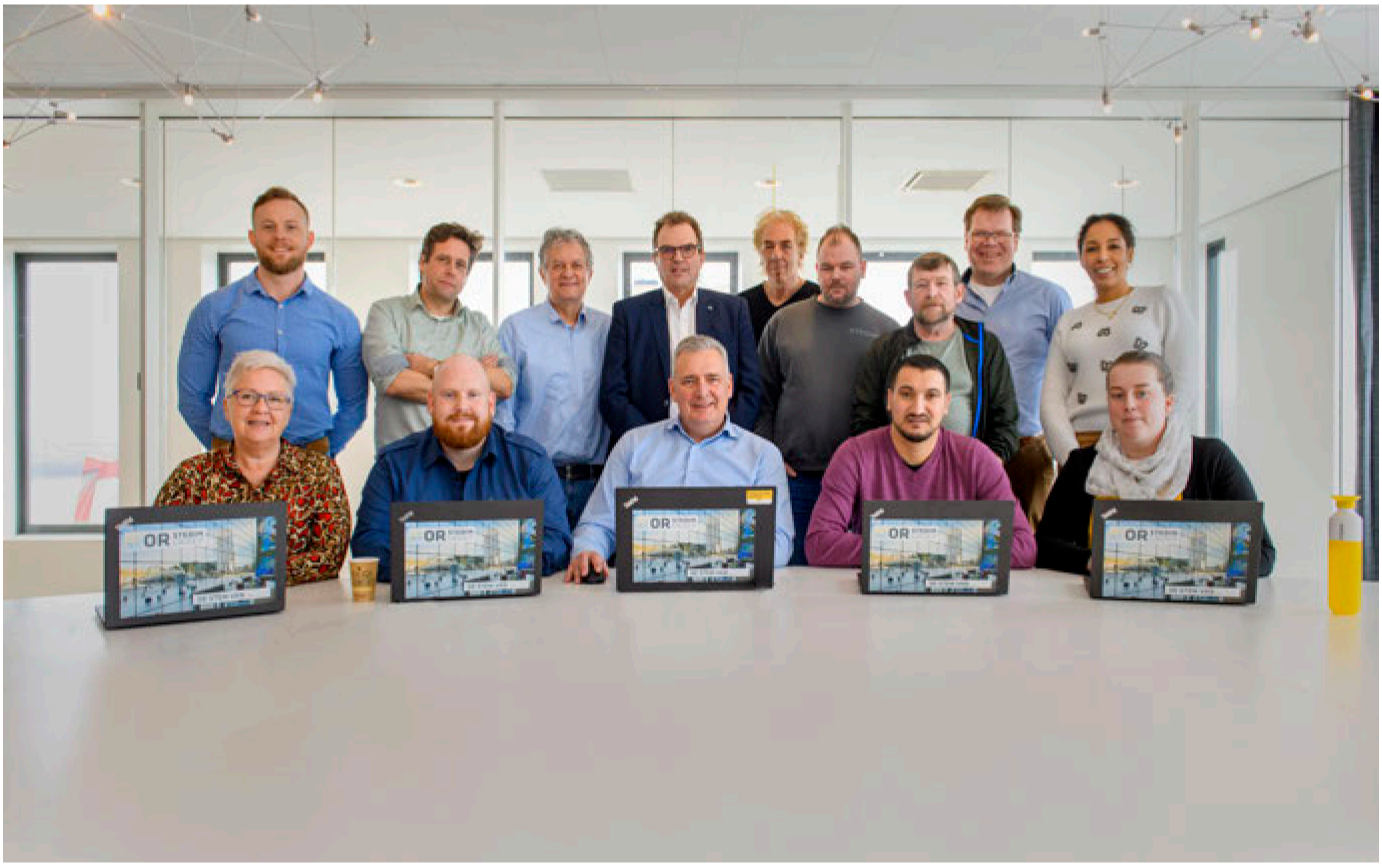
Data
At Stedin, the issue of data is continually dominated by the question of how our organisation weighs privacy against safety; for example, in relation to the use of our cars. The Works Council favours prioritising safety, although without undermining privacy.

Internal labour market and personnel plan
We are in permanent dialogue with HR to examine the potential within the organisation, with the aim of stimulating internal advancement. If an ideal candidate for a position is available outside the organisation but there is someone internally who is almost suitable (almost suitable = also suitable), the Works Council favours developing the knowledge and skills of our internal colleague to meet the required level for the role.

The Works Council has also consistently stressed the importance of creating the aforementioned strategic personnel plan so as to provide Stedin with a clearer picture of our current personnel assets and the types of challenge that we face with our employees.

Special attention is paid to redundancy and changes of work location. For example, we jointly examined the possibility of providing temporary compensation for travel time with regard to a change of work location. We prioritise travel time by public transport rather than by car in this respect. As a sustainable employer, Stedin is keen on encouraging employees to use public transport. On the subject of redundancies, we favour gradual and natural staffing consequences; for instance, by concentrating on people who are due to retire shortly. We will have a clearer understanding of this subject in the coming year.

Collective Labour Agreement – Social Plan
The Works Council is involved in the development and implementation of the Social Plan within Stedin Group.

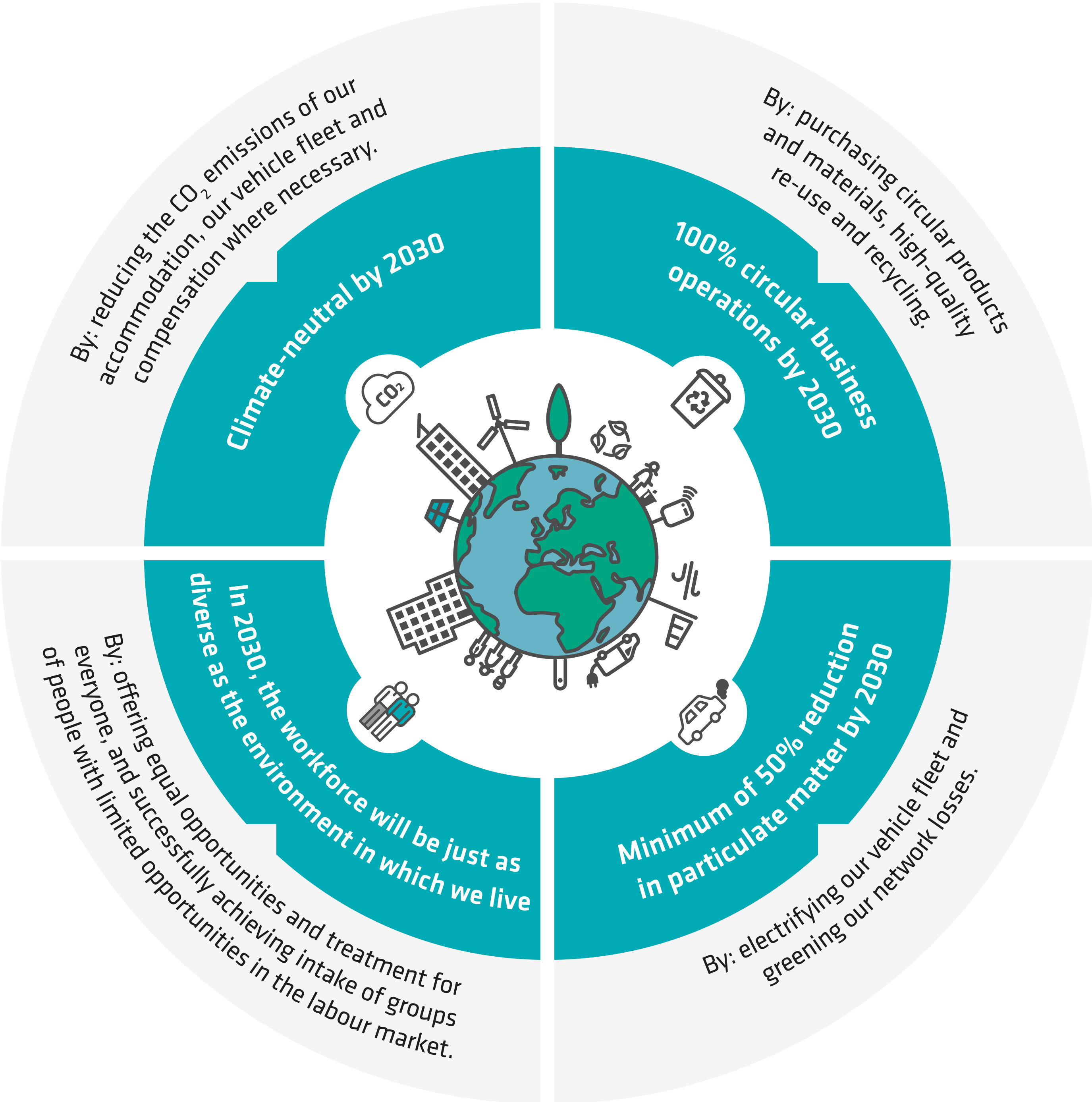


Standing from left to right: Rik Bakker, Alco de Lange, Leo van den Ende, Adri de Bruijne, Jack Steijger, Richard Buijtenhek, Bertus Schouten, Arjan van Voorden en Nicole Monteiro. Sitting: Ineke Kuijpers, Yeffrey van der Ven, Marcel Steinz, Mohamed Talhaoui en Wendy Sinnema.

‘Transitioning together is always at the forefront when we talk about sustainable business operations.’

One Planet Thinking

We formulated the One Planet strategy to reduce our environmental impact. We concentrate our efforts on those areas in which our impact is greatest: CO_2 emissions and use of raw materials and an inclusive society. We are committed to reducing and where necessary compensating for our impact in those areas. At the same time, we seek to increase our positive impact with regard to an inclusive society.



One Planet KPIs

Stedin Group manages its One Planet strategy through key performance indicators (KPIs). The table below shows the KPIs for 2019 and the corresponding results.

CO2 and particulate matter emissions	Target for 2018	Realisation in 2018	Target for 2019	Realisation in 2019
Compensation of network losses	100%	100%	100%	100%
Reduction of CO2 emissions	-14%	-2%	-9%*	-13%**

* reduction target compared to 2018
** actual reduction compared to 2018

Raw materials	Target for 2018	Realisation in 2018	Target for 2019	Realisation in 2019
Develop & calibrate KPI for circular purchasing, including raw materials passport	100%	100%	Not applicable	Not applicable
Purchasing volume of primary assets transparent via raw materials passport	Not applicable	Not applicable	18.0%	63.7%

Inclusieve society	Target 2018	Behaald 2018	Target 2019	Behaald 2019
Influx of residence permit holders in work-study programmes for fitters	10	100%	9	90%
Filling of jobs under Participation Act	84.5	18%	90.2	48%
Work placement posts for young people (in % of workforce)	>1%	100%	>1%	100%
Help for households to achieve energy savings (via Energy Bank Rotterdam)	100%	10%	100%	54%

CO2 and particulate matter emissions

CO_2 emissions generated by internal business operations at Stedin Group

Stedin Group complies with the industry-wide agreements on reporting its CO_2 emissions. Among other things, these agreements are based on the Green House Gas Protocol. Emissions generated by our internal business operations are divided into three main categories:

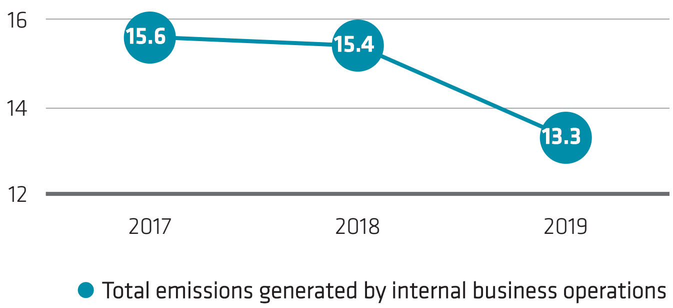
1. consumption of energy and CO_2 equivalents in our accommodation;
2. consumption of energy and CO_2 equivalents in our mobility, which includes our car use, commuting and business travel;
3. CO_2 emissions arising from the energy that Stedin purchases for its business operations. The largest contribution within this category comes from our network losses. This energy is lost during distribution which we must purchase.

In this report, we focus on the components that we are able to influence most directly. As Stedin Group, we aim to reduce these components to zero by 2030. By that year, our use of electricity will be entirely sustainable and our vehicle fleet will have switched to either electricity or sustainable hydrogen.

Reduction of CO_2emissions generated by internal business operations

We aim to reduce our CO_2 emissions as much as possible, advance greening and where necessary offset them.

In 2019, Stedin Group's internal business operations generated CO_2 emissions of 13,344 tonnes (13.3 Ktonnes). Compared with 2018, our CO_2 emissions decreased by 2,008 tonnes, or13.08%. As a result, we achieved our reduction target of 9%.

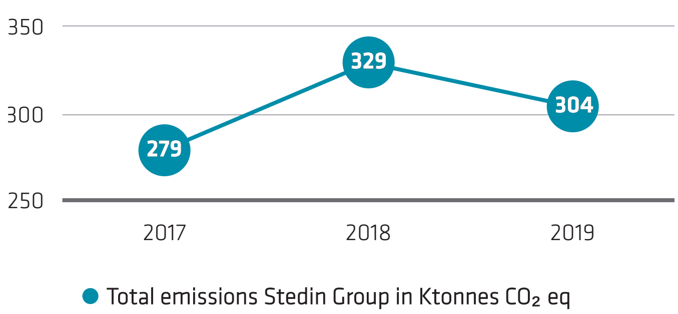


In 2018, CO_2 emissions in our internal business operations totalled 15.4 Ktonnes.

Total CO_2 emissions by Stedin Group

The CO_2 emissions generated by Stedin Group in 2019 totalled 304 Ktonnes (2018: 329 Ktonnes).

Besides the CO_2 emissions of our internal business operations (13.3 Ktonnes), that figure also includes the emissions from our gas grid (33.3 Ktonnes), generator units (2.2 Ktonnes), our electricity grid (0.5 Ktonnes), purchasing and investments (234.2 Ktonnes), upstream emissions of purchased fuels, electricity and heat (19.2 Ktonnes), and emissions from commuting from our externally hired staff (1.0 Ktonnes).



We provide a detailed overview of the CO_2emissions by Stedin Groep in the table at the end of this section.

One Planet procurement policy

We take responsibility for our chain emissions, such as the emissions which occur at our contractors or which arise during the production as well as the transport of the components and assets that we purchase. We take the CO_2 footprint as well as other One Planet issues such as material usage and social working conditions in the chain into consideration in our purchasing processes. They form the basis for selecting suppliers. You can read more about this matter in the section on Integrity/chain responsibility.

Compensation of network losses

Each year, Stedin Group compensates 100% of the CO_2 emissions arising from the electricity that we purchase for our network losses. At the moment, we do so by purchasing Guarantees of Origin (GoO). In the long term, Stedin Group wishes to make the network losses more sustainable by entering into Power Purchase Agreements (PPA). This process involves us purchasing green electricity directly from a sustainable source such as a wind or solar farm. With effect from 2021, we will purchase electricity for 40% of our network losses under a PPA of this type. This figure should be over 80% by around 2030.

Reduction of network losses

When it comes to network losses, prevention is even better than compensation, where possible. In 2019, a survey was carried out to examine the possibilities for using the roof area of our large buildings to install solar panels. Stedin Group selected the stations and technical areas that we will fit with solar panels in the coming years. The selection was based on the roof area, the costs of installation, the energy yield from the solar panels in relation to the station's energy consumption and the technical service life of the stations. Stedin Group's ambition is now to create a total capacity of 7 MWp, spread across roughly 70 stations. These figures may change in response to changing market conditions.

Particulate matter

Although particulate matter is one of the four main topics of our One Planet strategy, it does not feature as a separate KPI in the overview. The reason is that particulate matter emissions are largely linked to our grid losses and our mobility. If we raise the sustainability of our grid losses through Power Purchase Agreements and further electrify our vehicle fleet, we will automatically attain our 50% reduction target.

Reduction of CO_2 and particulate matter emissions via our mobility

At Stedin Group, mobility is divided into three categories: car use, commuting and business travel. We have a phased approach to making our mobility more sustainable based on the three As of avoiding, adjusting and augmenting the sustainability of what remains.

Our vehicle fleet forms a large part of this process, since Stedin Group has one of the largest commercial vehicle fleets in the Randstad conurbation plus the province of Zeeland. These vehicles emit CO_2 and particulate matter. Stedin Group's ambition is to achieve zero carbon emissions for our entire business mobility by 2030, accompanied by a 50% reduction of particulate matter emissions. Since early 2018, we have had a complete fuel ban on all cars with yellow registration plates (including lease cars since January 2019), replacing them with zero-emissions alternatives in due course. This is to be followed by the more than 1,700 large and small commercially registered vans.

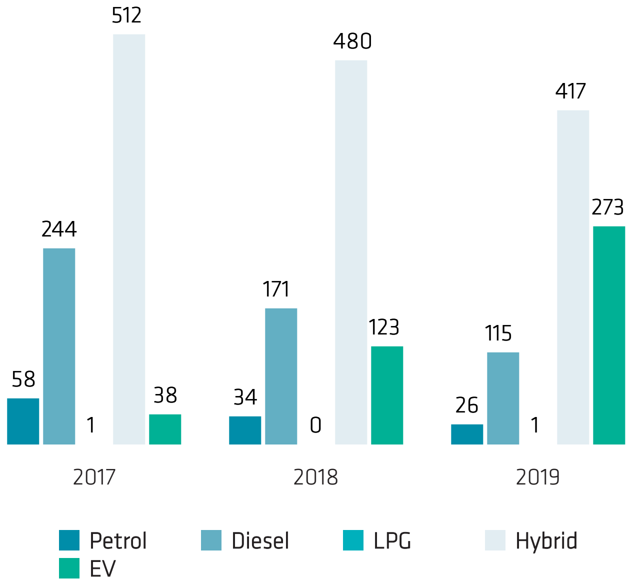
2019 saw the delivery of the first electric company van in the province of Zeeland and the response has been positive. It is part of a pilot project involving a total of five vans, in which the experiences of the fitters driving them are closely monitored. In addition to tractive power, the range of the vehicles also plays an important role.

We will increase the sustainability of our commuting. Employees who have a free season ticket for public transport can travel by public transport for business as well as private purposes. More and more employees are taking advantage of this facility. We are also encouraging sustainable alternatives at the same time, such as private lease arrangements for electric cars and a bicycle scheme. Stedin Group participates in the 'Coalitie Anders Reizen' (Travelling Differently Coalition) for more sustainable business mobility. We also participate in the LowCarDiet initiative.

Making car mobility more sustainable

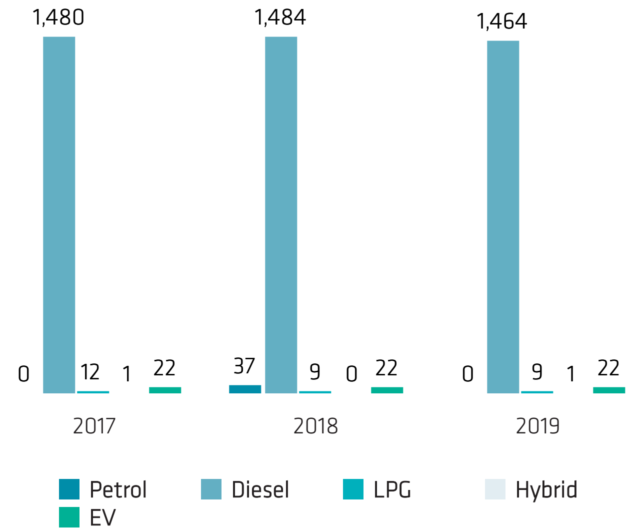
Yellow registration plates by fuel type

Electrification of our smaller category of lease cars (yellow registration plates) is proceeding according to schedule. At present, 14 and 250 of all our business vehicles are hybrid electric and fully electric, respectively. By the end of 2020, we aim to achieve zero emissions for all cars with yellow registration plates, including lease cars.



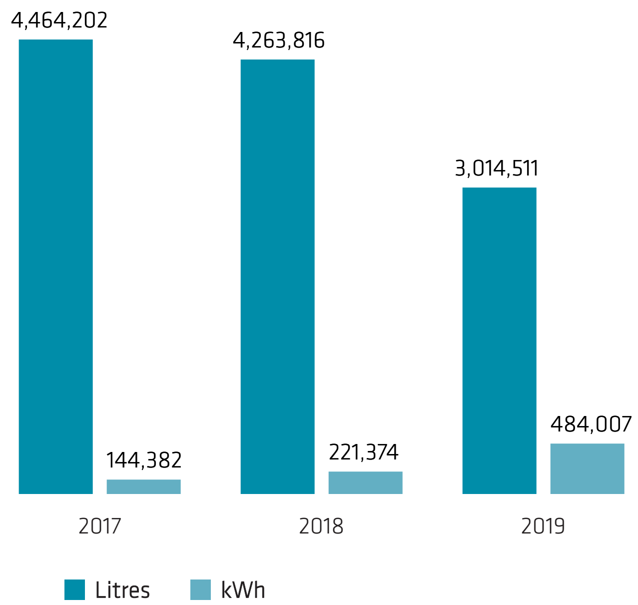
Commercially registered vehicles by fuel type

The pace of making our vehicle fleet more sustainable depends on the supply of alternatives to carbon-emitting vehicles. This supply continues to lag behind in the case of company vans in particular. These vehicles are heavier and also travel more kilometres. Among other things, several pilot projects involving hydrogen-powered vans are planned in 2020, while we will explore organisational changes that can facilitate efforts to improve the sustainability of this category.



Litres of fuel used and kWh consumption

Generally speaking, we have seen a decrease in the use of fossil fuels and an increase in electric charging. In 2019, we used 1,249,305 litres less fossil fuels (petrol, diesel, LPG) for our commercial and lease vehicles than in 2018.Electric charging of our commercial and lease vehicles increased by 262,633 kWh.



Accommodation

Stedin takes a conscious approach to its real estate. The main impact on our CO_2 reduction targets in 2019 came from the disposal of at least six locations, whose operations were transferred to existing buildings. Efficient accommodation practices lead to a smaller footprint for our buildings, as well as indirectly to a reduced mobility flow between the buildings.

To increase sustainability awareness among our employees and visitors, Stedin has fitted out a special meeting facility at our head office in Rotterdam, using existing materials that Stedin also employs in its grid management activities. The facility features a standing table made of gas pipes, partitions made of copper wire, reels as tables, plant pots made of old transformers and many other recycled materials.

Use of raw materials

We purchase products such as pipes, cables, meters and transformers. Many raw materials for these products, such as copper, aluminium and plastics, are becoming increasingly scarce and their extraction or production often causes environmental harm. We aim maximise circularity both from a sustainability perspective and for business reasons. We purchase products with as much recycled raw material content as possible, challenge suppliers to deliver products that facilitate maximum recycling after the useful life has expired and work with our waste processors to ensure the highest-grade recycling. This way, we endeavour to take responsibility in different parts of the supply chain.

A socially responsible purchasing policy forms the basis for the selection of the most forward-looking suppliers. Where

Climate-neutral Vlissingen support centre

A pilot project was carried out at Enduris in 2019: one of the regional offices, Vlissingen support centre, was transformed into a climate-neutral building. This result was achieved by installing passive climate ceilings, rendering the old air-conditioning units redundant. Heating is supplied throughout the building by a biomass boiler, replacing the previous system that ran on natural gas. Solar panels were also installed on the roof to compensate for the electricity consumption. Outside, charging stations have been installed for electric cars. We are monitoring closely how people experience the building since the transformation. Going forward, we aim to extend the sustainability policy towards other buildings as well as share this experience in the various knowledge platforms for the energy transition.

Stedin office in Delft much more sustainable

Following extended renovation, we were able to move back into our regional office in Delft at the end of 2019. The renovation has made it possible to double the number of building users. It goes without saying that the premises were renovated in a sustainable way. Instead of wastage, there was extensive reuse of raw materials and energy-efficient building systems were installed. We also used a variety of innovations, such as climate ceilings, thermally activated concrete and special blinds on the building façade to reduce the heat load. The production hall, which is as large as two football pitches, is fitted with LED lighting. The car park has 50 charging facilities that are powered by 1,158 solar panels, among other things.

possible, we include circularity targets in tendering procedures. For instance, circularity and other One Planet issues such as CO_2 emissions were specifically taken into account in 2019 in the tendering procedure for switchgear, among other things. In addition, we are working with suppliers to develop more circular products. We request a raw materials passport from suppliers and participate in pilot projects. Examples include the Fair Meter as well as a project in which we are exploring the development and application of more circular cables. With this regard, we jointly review requirements and wishes. We have agreements in place with service providers for the responsible treatment of residue streams; they collect and process these streams for us.

KPI for circular purchasing and the raw materials passport

As from 2019, we will request suppliers to fill in a raw materials passport in tendering procedures for all our primary assets. This serves to ascertain the raw and other materials of which the product consists, how much recycled material it contains and the extent to which the product or material can be recycled after its useful life.

We aimed to have insight into the degree of circularity for at least 18% of our primary assets in 2019. This target has been comfortably achieved. The 16 raw materials passports which we requested from two suppliers mean that we now have data on 63.7% of our primary assets. Based on sector averages and insight into current results, we expect a circularity percentage of 40% to be feasible in 2020. The results are shown in the following figures.

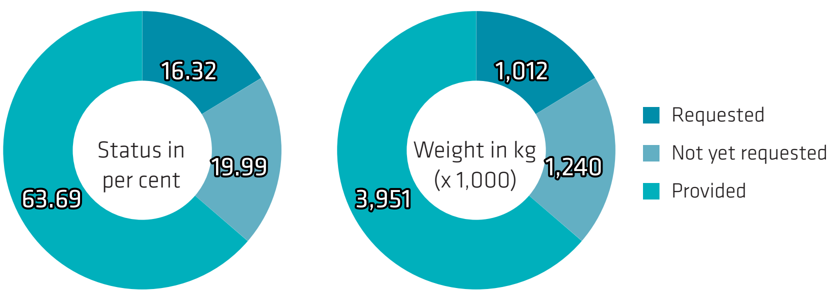
Redeployment of assets

Redeployment of assets is an initiative aimed at professionalising and upscaling the reuse of pipelines as well as transformers, for instance. We store the assets that are returned from the grid. Together with experts from various departments, we then examine what we can reuse. Next, a team of fitters sets to work on reconditioning the asset for further use. After a quality inspection, they can be ordered once again.

This process eliminates the need to throw away our raw and other materials. We also ensure that ageing assets which can no longer be ordered from the manufacturer remain available. Finally, it generates cost savings in the form of avoided purchase costs. We have already made a start on redeploying grid stations and further professionalising the workshop for used transformers. Our ultimate aim is to work with Alliander and Enexis on a platform where all the reconditioned assets are made available for redeployment.

If an asset can no longer be used in its entirety, we ensure that the residual materials are separated in an environmentally friendly way, as far as possible into recoverable raw materials.

Status of request for raw materials passport based on total ordered weight (in kg)



Detailed information on CO_2 emissions by Stedin Group

Leakage loss & network losses	2017	2018	2019
Leakage loss of natural gas grid	30.060 tonnes CO2eq	33.769 tonnes CO2eq	33.346 tonnes CO2eq
Electricity grid losses	417.852 tonnes CO2eq	427.778 tonnes CO2eq	426.000 tonnes CO2eq

Energy intensity ratio = Energy consumption (in GJ) divided by annual revenue (in million €)

GHG emission intensity ratio = Total emissions including greening (in tonnes $CO_{2eq)}$ divided by annual revenue (in million €)

Energy intensity ratio	2017	2018	2019
Energy consumption	209.884 GJ	219.001 GJ	180.441 GJ
Annual revenue	€ 1.194 million	€ 1.268 million	€ 1.234 million
Energy intensity ratio	175,8 GJ/million €	172,7 GJ/million €	146,2 GJ/million €

GHG emission intensity ratio

Scope 1	2017	2018	2019
Gas consumption of buildings	1.247 tonnes CO2eq	642 ton CO2eq	457 ton CO2eq
Leakage loss of natural gas grid	30.060 tonnes CO2eq	33.769 ton CO2eq	33.346 ton CO2eq
Lease & company cars	12.062 tonnes CO2eq	11.708 ton CO2eq	9.056 ton CO2eq
Total	43.369 tonnes CO2eq	46.119 ton CO2eq	42.859 ton CO2eq

Scope 2	2017	2018	2019
Electricity/heat consumption of buildings	546 tonnes CO2eq	847 ton CO2eq	192 ton CO2eq
Electricity grid losses	417.852 tonnes CO2eq	427.778 ton CO2eq	425.084 ton CO2eq
Total	421.954 tonnes CO2eq	432.026 ton CO2eq	425.276 ton CO2eq

Scope 3	2017	2018	2019
Commuting, business trips, flights	3.711 tonnes CO2eq	5.038 ton CO2eq	4.635 ton CO2eq
Total	3.711 tonnes CO2eq	5.038 ton CO2eq	4.635 ton CO2eq

Total	2017	2018	2019
Total footprint	469.034 tonnes CO2eq	483.183 ton CO2eq	472.770 ton CO2eq
Greening	-417.568 tonnes CO2eq	-427.300 ton CO2eq	-424.612 ton CO2eq
Total including greening	51.466 tonnes CO2eq	55.883 ton CO2eq	48.158 ton CO2eq

Annual revenue	€ 1.194 million	€ 1.286 million	€ 1.234 million
GHG emission intensity ratio	43,1 tonnes CO2eq/million €	43,5 tonnes CO2eq/million €	39,0 tonnes CO2eq/million €

Stedin is working vigorously to phase out 'SF_6' in its switchgear

SF_6 is used as an insulation medium in our high- and medium-voltage switchgear. The gas ensures that electrical arcs formed during switching are quickly extinguished. This property allows the switchgear to remain relatively compact, which is useful when switchgear needs to be installed in a station with confined space. SF_6 has a major disadvantage, however: an SF_6 molecule has a CO_2 equivalent that is 23,000 times greater than a CO_2 molecule. As a consequence, SF_6 is very harmful if released into the atmosphere. While most switchgear is leak-proof, a limited quantity of SF_6 is emitted each year. In 2019 Stedin added 7,57 kg SF_6.

Limited alternatives

Stedin aims to cut back its use of SF_6 in switchgear. However, the range of alternatives is limited and very expensive, where available. This situation poses a problem for a grid manager committed to investing at the lowest social cost. We are also aware that the considerable expansion and the increased capacity of the electricity grid mean that an increasing amount of SF_6 is being used in our grids. Conversely, the increased demand for alternatives will bring down the price of SF_6-free switchgear over time.

A first for our new medium-voltage switchgear and a pilot project in Middelharnis

Our 'One Planet' thinking means that we are stepping up our efforts to make our business operations more sustainable. An example is the invitation that we extended to bidders in the tendering procedure for our switchgear to tender SF_6-free switchgear. By also taking the CO_2 footprint into consideration, including SF_6, we opened up the competition to 'more sustainable' switchgear. To cover any additional costs which might arise, Stedin also applied for a subsidy that was available for this technology. The tendering procedure resulted in the selection of two suppliers: Eaton and Siemens. Eaton will supply the SF_6-free switchgear. Of the estimated 600 pieces of switchgear that Stedin orders each year, roughly 80% will be SF_6-free in the coming years. At 3 kg of SF_6 per item on average, we are thereby eliminating the use of approximately 1,500 kg of SF_6. This figure is equivalent to around 34,000 tonnes of CO_2. The switchgear consists of closed systems, so there is zero likelihood that these emissions would have been released fully into the atmosphere. We nonetheless believe that reducing the use of SF_6 as much as possible is the right thing to do. This way, we prevent the risk of emissions occurring and we also send out a message to the market which encourages the development of SF_6-free switchgear.

In addition to the successful tender outcome for medium-voltage switchgear, Stedin purchased SF_6-free switchgear from General Electric (GE) in 2019. The switchgear was installed in the 50kV distribution substation in Middelharnis last summer. Stedin will take the switchgear into use in early 2020. The installation of this gear is also considered to be a major success. The use of so-called G_3 gas means that CO_2 emissions are as much as 99% less than SF_6 gas-insulated switchgear.

Inclusive society

Stedin Group is committed to working for equal opportunities and long-term employability for all. This is described in the section Professionally competent employees now and in the future.

One Planet governance

The Board of Management (BoM) is responsible for the ambitions and objectives that have been formulated for Stedin Group. In 2016, the BoM approved ambitions that provide direction for Stedin Group's sustainability policy towards becoming a climate-neutral organisation by 2030. KPIs have been formulated for the main impact categories – CO_2 emissions, use of raw materials, particulate matter emissions and inclusive society – for the business units that have an influence on them. Results on the KPIs are reported to the BoM and the directors of the business units concerned every quarter. A quarterly analysis is also carried out of strategic risks and opportunities, which includes the topic of sustainability. The strategic risk 'excessive environmental impact' is not included in the Risk Management section, as this risk is managed within the defined risk tolerance. One full-time employee is available in the Strategy corporate services department for driving, monitoring and pursuing the continued development of the sustainability strategy within Stedin.

Sustainability rating

Leading rating agency ISS ESG gave us a 'B' rating for sustainability in 2019. This prime rating sets us apart as one of the top performers in our sector.

First-time issue of green bonds by Stedin Group

Stedin Group issued green bonds for the first time in its history during 2019. A green bond is a type of bond that is used in order to raise money for environmentally friendly projects. Green bonds are similar to traditional bonds in terms of deal structure. Their pricing is the same and they are traded in the regular manner on the stock market.

> ‘The green bonds have more than just financial added value: they prove that our financial, operational as well as sustainability strategies form an integrated whole and mutually reinforce each other.’

Stedin Group has put together a selection of green projects for which it has issued a green bond. The money raised is invested in connecting charging points for electric transport, sustainably refurbishing our office buildings, rolling out smart meters and making sustainable investments in our grid. This latter category covers connections of large wind and solar farms as well as investments that facilitate a greater input of sustainable energy. Bonds were issued for a total amount of 500 million euros. Stedin Group has committed to reporting on how the money raised is used across the specific projects.

The issue of green bonds is a significant milestone for Stedin Group. Investors are increasingly asking for proof of the sustainable goals that we have set for 2030. By issuing green bonds, Stedin Group is underlining its commitment to sustainable business operations by linking investments directly to sustainable projects. Stedin Group will continue to explore opportunities for green financing into the future, based on the Green Finance framework, which is available on our website.

Green Bond categorie en mogelijke duurzame projecten	Geschatte toewijzing (in %)	Relatie met SDG's
Renewable energy Projects aimed at: • Increasing the production from renewable energy sources: Investments and/or expenditures to connect renewable energy production and storage units directly to the grid (including power lines and related infrastructure such as substations) • Iintegrating renewables in the grid wile enhancing grid stability: Investments and/or expenditures aimed at integrating and enhancing the transmission capacity for renewable energy in the grid	28.1	7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION
Energy efficiency Projects aimed at improving energy efficiency and the reliability of the energy supply: Investments and/or expenditures in smart grid technologies and installation of smart meters	64.6	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Climate-neutral mobility Projects aimed at promoting climate-neutral mobility: Investments in electric vehicle charging stations and related infrastructure	2.6	11 SUSTAINABLE CITIES AND COMMUNITIES
Low-carbon buildings Projects aimed at the acquisition and renovation of low-carbon buildings in NL: New, existing or refurbished buildings which have received at least one (or more) of the following classifications (EPBD: A; LEED: ‘Gold’ and above; BREAAM: ‘Very Good’ and above; DGNB: ‘Gold’ and above; Refurbished buildings with at least two steps improvement in energy label up to at least EPBD label B; Individual investments in Green Buildings to ensure environmental improvements such as renewable energy projects, energy-efficient lighting and so on)	4.7	11 SUSTAINABLE CITIES AND COMMUNITIES

Sponsorship/Good causes

Stedin supports a number of sustainable initiatives that are closely aligned with its own mission and strategy. One example is 'Studio Energie'. This podcast encourages an open dialogue on sustainability in society. Investigative journalist Remco de Boer interviews a different energy specialist from a particular sector each time, leading to a discussion of various topics and positions.

The collaboration between Stichting Samen 010 (which also covers Energy Bank Rotterdam) and Stedin was continued in 2019. This foundation helps families that live at or around subsistence level, who often have difficulty paying their energy bills and controlling their energy consumption. 'Energy coaches', including Stedin employees, help them to reduce their energy costs and prevent their power from being cut off. An additional advantage is that CO_2 emissions are also reduced as a result. Stedin also entered into a partnership with Energy Bank The Hague in 2019. For their Christmas present this year, Stedin employees had the option of donating their allowance to the Energy Bank. Stedin has rounded up the amount, resulting in a nice donation of € 5,000. This amount is divided between the Energy Bank Rotterdam and The Hague.

Raising awareness about sustainable energy among young people is a priority for Stedin. The same can also be said for the topic of 'Technology', prompting Stedin to support the National AI programme. Artificial intelligence has long ceased to be science fiction. However, despite the impressive developments, the technology behind AI is still in its infancy. By engaging the wider community, particularly young people in senior secondary vocational (MBO) education, AI can become a technology that all of us both provide and receive. Furthermore, the National AI programme is an ideal stepping stone for people wanting to learn more about the issues surrounding this fascinating subject.

Aside from the collaborations referred to above, 20 Stedin employees took part in the Laurentius Dinner at the Laurenskerk church in Rotterdam on Saturday, 5 October. This biennial dinner is organised to focus on poverty in the city of Rotterdam. Together with 80 other volunteers, our colleagues served dinner to more than 600 people who rely on the food bank or who live in social isolation.

Stedin's total sponsorship budget in 2019 was € 120,000, part of which was also used for community initiatives and good causes in which individual Stedin employees played an active role. The sponsorship budget was € 175,000 in 2017 and € 225,000 in 2018.

‘Missie H2’, an alliance of six leading Dutch companies in the energy supply chain, has entered into a partnership with TeamNL. Under the 'Missie H2' banner as well as in partnership with TeamNL, Gasunie, Shell Netherlands, Remeha, Stedin Group, Port of Amsterdam and Groningen Seaports are joining forces before as well as during the Tokyo 2020 Olympic and Paralympic Games to promote hydrogen as an important as well as sustainable energy carrier for the near future. Taking its name from the hydrogen molecule H2, 'Missie H2' is also supporting TeamNL en route to the Tokyo 2020 Olympic Games at the same time. Stedin Group is participating in 'Missie H2' with the aim of making the Netherlands even more familiar with the benefits of hydrogen and showing how it can be used as an alternative to natural gas for heating homes, while retaining the current gas grid.

Waste (in kg)

The table below shows the amount of waste from Stedin Netbeheer.

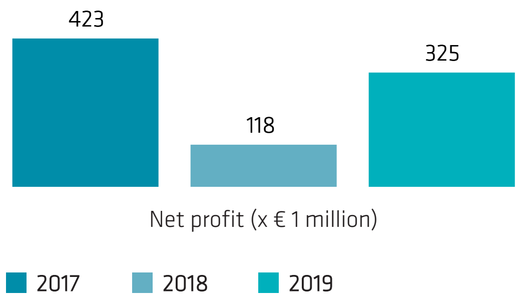
Waste	2017	2018	2019
Total waste by type	6,400,386	8,588,912	9,576,136
Total waste disposal recycled	5,831,399	7,755,969	8,623,144
Total waste disposal non-recycled	568,987	832,943	952,992
% waste non-recycled	9%	10%	10%
Total asbestos	487,730	771,930	718,550
% share asbestos in non-recycled	86%	93%	75%

4. Financial results

Stedin Group achieved net profit of € 325million in 2019. The earnings are in line with our expectations.

Financial results over 2019

After deducting taxes, Stedin Group's net profit before profit appropriation was € 325 million (2018: € 118 million). Earnings therefore increased by € 207 million compared with 2018 and included € 251 million related to the sale of Joulz Diensten in the first half of 2019.



As part of our strategic spearhead 'Sustainable business operations', it is important to retain our financial health, thus ensuring that Stedin remains a reliable and flexible partner in the energy transition. We continue to make substantial progress towards this goal.

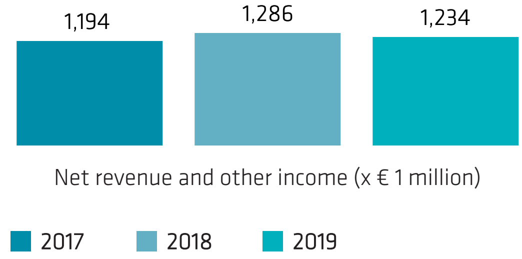
- Stedin is engaged in a constructive dialogue with its shareholders on the long-term financing. That dialogue will continue in 2020.
- Agreements have been made about the ambition to retain the A-credit rating, with the corresponding financial ratios such as solvency and FFO/Net debt.
- We are continuing and accelerating efficient as well as excellent business operations, with operating cash flows being used for smart investments as much as possible.

Sale of Joulz Diensten

On 30 April 2019, Stedin sold its infrastructure and metering business Joulz to the British investment company 3i Infrastructure for € 310 million. Both departments of Joulz targeted the business market and were therefore no longer aligned with Stedin's strategy, which is focused on regulated grid management. The sales proceeds is used to strengthen Stedin's balance sheet.

Net revenue and other income

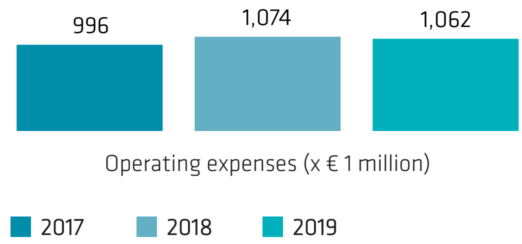
Net revenue and other income for 2019 amounted to € 1,234 million, which is € 52 million (4%) lower than in 2018 and which is almost fully attributable to non-regulated revenue. For example, Joulz Energy Solutions contributed € 29 million to net revenue and other income in 2018, while Joulz Diensten contributed € 30 million. Regulated revenue was virtually unchanged from the preceding year.



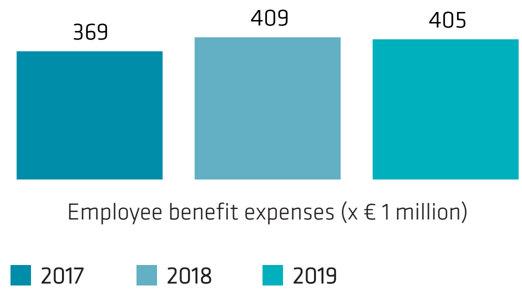
In the metering domain, the rates are set by the decision on rates (tariefbesluit) of the Netherlands Authority for Consumers and Markets (ACM). In addition, the rates include a reduction to compensate for the excess returns achieved in previous years.

Operating expenses

Our operating expenses decreased by € 12 million (1%) to € 1,062 million in 2019 due to lower employee benefit expenses and a net decrease of the other expenses.

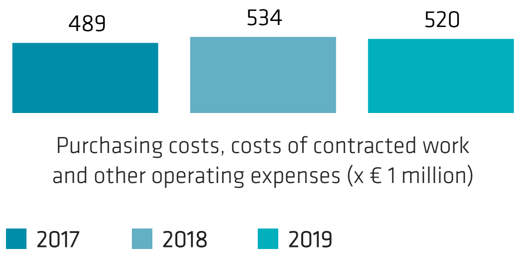


Employee benefit expenses amounted to € 405 million in 2019 (2018: € 409 million).



Employee benefit expenses decreased by € 10 million due to the sale of the commercial operations of Joulz Energy Solutions and Joulz Diensten. This decrease was partly offset by an increase of € 6 million in employee benefit expenses, which was in turn partly offset by a lower provision for employee benefit expenses and accrual for leave days. The increase was driven by higher average costs per FTE due to the new company collective labour agreement that came into force as of 1 May 2019 and to higher costs per FTE due to a greater share of FTEs temporarily hired externally.

Purchase costs, costs of contracted work and other operating expenses decreased by € 14 million (3%) in 2019 to € 520 million.



Purchasing costs, costs of contracted work and other operating expenses (x € 1 million)

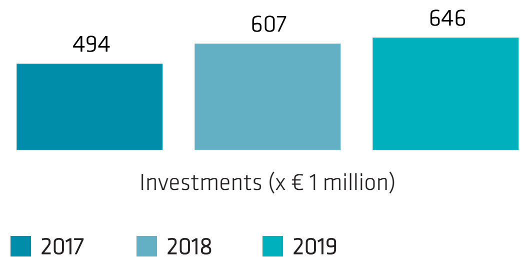
The purchase costs decreased by € 5 million compared with 2018, mainly to due falling electricity prices.

Costs of contracted work and other operating expenses decreased by € 9 million. The sale of Joulz Energy Solutions and Joulz Diensten resulted in a decrease of € 46 million for these items, while the implementation of IFRS 16 Lease Accounting resulted in a decrease of € 16 million (with a simultaneous increase in depreciation and amortisation as well as financial expenses). This decrease was partly offset by an increase in costs by a total of € 53 million, particularly due to costs for the addition to the provision for removing old gas connections, higher legal and consultancy costs, increased customer-related activities and an increase in ICT costs.

In 2019, we saved € 8 million in business operations, partly owing to more intelligent maintenance methods. In addition, further optimisation drives were implemented in work flow planning for smart meter installation.

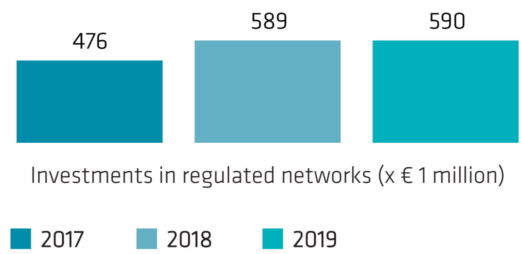
Investments

Investments in property, plant and equipment and intangible assets in 2019 amounted to € 646 million, an increase of 6.4% (2018: € 607 million).



Investments (x € 1 million)

Investments in regulated networks increased from € 589 million in 2018 to € 590 million in 2019. This increase related mainly to our customer- and grid-driven activities.



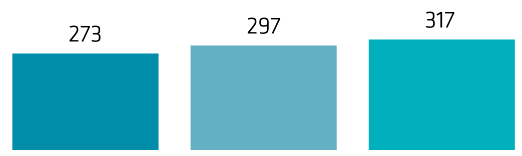
Investments in regulated networks (x € 1 million)

The nature of the investments is described in more detail within the section on Improved grid management.

Hours worked by own and externally hired staff which are allocated directly to own investment projects are deducted from the operating expenses as capitalised production. Compared with the preceding financial year, the costs of capitalised hours increased by € 14 million (8.4%) to € 180 million owing to increased levels of investment.

Depreciation and amortisation

Depreciation charges and impairments of non-current assets amounted to € 317 million, an increase of € 20 million (6.7%) compared with the previous year.

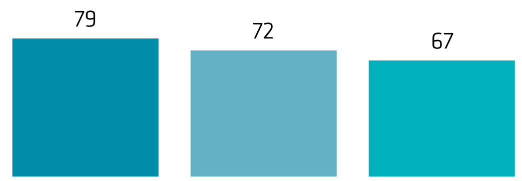


Depreciation and amortisation (x € 1 million)

This increase was mainly attributable to the implementation of IFRS 16 (€ 17 million) referred to earlier, as well as higher depreciation and amortisation due to an increase in non-current assets (€ 20 million), partly offset by lower accelerated depreciation (€15 million) and the effect of the sale of Joulz Diensten (€ 4 million).

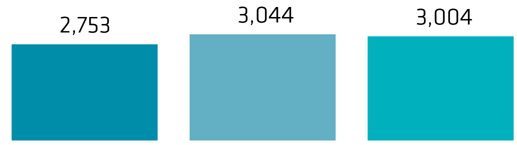
Financing, financial income and expenses, and liquidity

Our net financial expenses amounted to € 67 million in 2019 (2018: € 72 million) and related mainly to the interest expense on long-term external loans.



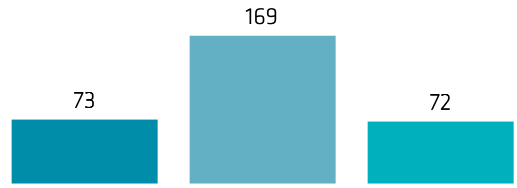
Financial expenses (x € 1 million)

Stedin used the sales proceeds from Joulz Diensten to repay part of its interest-bearing loans and to finance part of its investments. The remaining negative cash flow led to an increased financing requirement, which was met by a green bond issue of € 500 million in November 2019. A portion of this loan served to refinance existing loans that were repaid in the fourth quarter of 2019. In addition, early repayments of € 327 million were made in November and December 2019 to optimise returns on freely available funds compared with interest expense. On balance, interest-bearing debt decreased by € 40 million to € 3,004 million as at 31 December 2019 (2018: € 3,044 million).



Interest-bearing debt (x € 1 million)

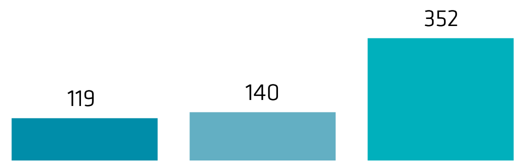
Our cash and cash equivalents amounted to € 72 million as at 31 December 2019 (2018: € 169 million).



Cash and cash equivalents (x € 1 million)

Income tax

Profit before tax was € 352 million for 2019 (2018: € 140 million).



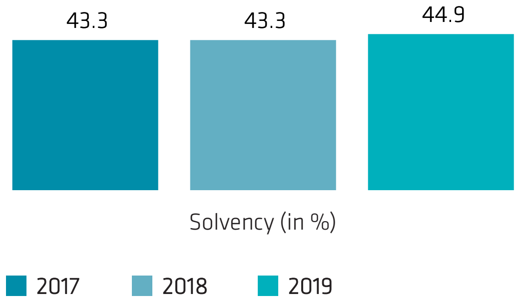
Profit before tax (x € 1 million)

The tax expense rose by € 5 million in 2019 to € 27 million. The effective tax rate (as a percentage of profit before tax from continuing operations) in 2019 was 7.7% (2018: 15.7%).

In December 2019, the Upper House of Dutch Parliament approved the bill to increase the corporate income tax rate to 25% in 2020 and to 21.7% in 2021. This fact means that the deferred tax assets and liabilities will be settled with the Dutch Tax and Customs Administration at higher rates in the future. The measurement of the deferred tax assets and liabilities as at 31 December 2019 reflects those higher rates with a negative effect of € 2 million on corporate income tax.

Solvency and credit rating

Solvency at year-end 2019 was 44.9% (year-end 2018: 43.3%).



Stedin Group's policy is aimed at maintaining minimum long-term solvency of 40%. Stedin Group's goal is to retain its long-term A- credit rating with a stable outlook according to Standard & Poor's (S&P). Consequently, there is an adequate buffer for complying with the minimum credit rating requirement pursuant to the Network Operators Financial Management Decree (Besluit Financieel Beheer Netbeheerders) (a minimum rating of BBB/Baa2). S&P reconfirmed the A- credit rating with a stable outlook as of 31 July 2019.

Financing of the energy transition

Stedin Group is faced with substantial investments in the energy grid within its service area due to the energy transition. Stedin Group's Supervisory Board, Board of Management and shareholders are in agreement on the need for action to safeguard affordable as well as reliable energy supply in the future as well. The investments that Stedin needs to undertake due to the energy transition are in addition to the ongoing investments that are required in order to ensure the proper operation of the electricity and gas grids. Stedin's permitted income is growing less rapidly than required for continuing to finance all these investments in the future.

In tandem with a delegation of shareholders, Stedin is examining which approaches to solutions can be utilised in order to finance the energy transition. The huge investments in the energy transition will place great demands on our financial position in the years ahead.

> ' Ensuring the continued reliability of our energy grid, both in the present and in the future, is our duty to society. Together with various stakeholders, we are therefore considering the possibilities for financing the energy transition.'

5. Non-regulated activities

Sale of Joulz Diensten

Joulz Diensten was sold on 30 April 2019 to the British investment company 3i Infrastructure. Job security of the 150 Joulz employees is guaranteed. Joulz Diensten will focus in full on the commercial market, which offers opportunities for the organisation.

NetVerder

We will continue the operations that were not sold with Joulz under the name NetVerder B.V. As from 1 May 2019, this name covers the activities of the grid operator focused on developing, constructing and maintaining energy infrastructures for heat, steam as well as biogas.

Steam network in Rotterdam Botlek

The activities of Joulz Stoomnetwerken BV are now also included under NetVerder. Together with the companies in the Botlek area, the steam network has for almost seven years been doing what is expected of it: safely and reliably transmitting steam and condensate from the steam producer AVR Afvalverwerking to the customer Emerald Kalama Chemical. Both these companies are located in the Botlek area. This steam is sourced sustainably. New sources of steam were connected in 2019, further increasing supply security. The new sources are AVR's biomass energy plant and steam from Cabot Corporation. In 2019, some 223,000 tonnes of steam were distributed using the Rotterdam Botlek Steam Network. There are also plans for a significant expansion of the steam network. NetVerder is therefore engaged in extensive talks with the Port of Rotterdam Authority, local authorities and other parties in the Botlek area to execute this project jointly.

Increasing the sustainability of heat

In line with its strategy, Stedin Group seeks to accelerate the energy transition by actively exploring how to improve the sustainability of heat supply in the built environment within its service area.

In addition to electrification, collective sustainable heating (such as a heat network) is a possible solution to make the built environment gas-free. NetVerder is seeking to learn and act simultaneously in the field of collective heating so as to make a timely contribution to transforming the energy system. Phasing out natural gas in combination with further electrification requires challenging adaptations of the public energy infrastructure.

NetVerder therefore continued developing a portfolio of projects focused on collective heat systems in the past year driven by the public interest. NetVerder's role in these projects is to develop, build and manage the infrastructure required for this purpose.

Putting gas-free heat supply in place is a local and collective task. Collaboration between various parties, such as water authorities, municipalities, businesses, the other grid managers, housing associations, civil-society organisations and residents is essential in this context as well. NetVerder acts as the linchpin between all these parties, enabling the actual execution of plans for open heat networks. Openness and transparency concerning all aspects of the development are key requirements for any collaboration. NetVerder is actively involved in heating projects in Delft, Rotterdam, The Hague and several smaller municipalities.

Sustainable heating in Delft

In Delft, NetVerder is collaborating with the housing associations Woonbron, Vestia, Vidomes and DUWO as well as with the municipality of Delft to create a heating network. A heating network is the most suitable solution for the sustainable heating of – initially – 69 residential buildings with collective boilers in the Voorhof and Buitenhof districts. This provision relates to a total of around 5,000 rented dwellings belonging to the housing associations concerned. Initially, a geothermal energy source will be used as the heat source. At a later stage, it may also be possible to use the residual heat from the Port of Rotterdam. This heat is transmitted via the 'Leiding door het Midden' via Delft to The Hague.

DNWG Infra

High-voltage technology, renovation of Dodewaard station

The High-voltage technology division is carrying out the renovation of the 380kV Dodewaard station commissioned by TenneT. This station has a double-rail configuration to which three transformer fields and four line fields are connected. The work consists of replacing the severely outdated operating and security systems. The final renovated field was put into operation in November 2019.

DNWG Warmte - Ouverture

DNWG Warmte B.V. (DNWG Warmte) is part of DNWG and was established in order to facilitate heat projects. For example, heat and cold are supplied to the Ouverture district of Goes in this way.

DNWG Meetdiensten

Contracts for metering services at Scheldestromen Water Authority and Windpark Krammer B.V. were signed for the next 15 years. A separate website (www.DNWG-meet-diensten.nl) has been set up for metering services, simplifying access for customers as well as providing a good overview of the products and services offered by the metering business. DNWG Meetdiensten entered into a management contract with the municipality of Middelburg as well as Scheldestromen Water Authority for the supply of heat and cold to both offices through a shared heat and cold storage system.

Cooperation between DNWG Infra and Evides Waterbedrijf

Together with Evides, DNWG launched a new method for the installation of drinking water pipes in 2019. The method is called water-bearing installation and involves closing the trench every day, as a result of which there is less inconvenience for the surrounding environment. This method is cheaper and constitutes a new standard for Evides Waterbedrijf.

Certification

DNWG Infra was recertified for ISO 27001 within the scope of the Certification Scheme for Cable Infrastructure and Pipe-Laying Companies (Certificatieregeling Kabelinfrastructuur and Buizenlegbedrijven, CKB) on the basis of an audit in 2018. DNWG Infra is also an approved heat metering company, in addition to being an ODA (independent service provider) and EMV (approved party responsible for metering) for gas and electricity metering systems.

> ‘Henk van den Berg: The energy transition is in full swing. Transitioning together results in acceleration and connection. During this process, Stedin is an essential and expert link.’

Henk van den Berg (on the right) has provided technical support to a solar project as a board member of the HoekscheWaardDuurzaam cooperative, in conjunction with the HW Wonen housing association. Another nine locations managed by HW Wonen are eligible for a follow-up project. Levent Kirkar, Feed-in Product Owner at Stedin, has enabled the return of the energy generated to the electricity network.

What have we learnt

Stedin Group works on constructing, managing and maintaining the energy grids in our coverage area as effectively as possible. In doing so, we view facilitating the energy transition as an important task. We incorporated the principal lessons learnt and experiences of 2019 into the selection and implementation of the four strategic initiatives on which we will focus in 2020.

Grid capacity

In 2019, we saw concrete evidence of how the energy transition is accelerating in the issues concerning grid capacity. In several parts of the Netherlands, grid managers were not always capable of connecting new solar farms to the electricity grid on time. While those issues were less acute for Stedin than for other grid managers, we are likewise asking ourselves how we should deal with them. Did we as grid managers fail to foresee this substantial growth of solar farms in time? What can we do to ensure that we are alert to developments on time? Our principal lesson is twofold. In the first place, grid managers such as we will need to be more transparent about our working methods and motives. As part of this process, we need to make clear what problems we are faced with and what solutions we are working on to resolve or prevent them. This process also includes proactively sharing information with market parties and striving to make this information properly accessible. Secondly, as grid manager, we need to make ourselves heard much more clearly in the public debate.

> ‘During this phase of the energy transition, we are coming up against difficult dilemmas and we need to bring them up for discussion.’

It is of the utmost importance not only to increase the sustainability of our energy supply but also to ensure that the path towardsthis result remains affordable for our customers and is viable for the grid managers. This reason is why coordination and direction by the government are so important.

System operator

In view of all the attention demanded by the current questions on grid capacity, there is a risk that we will devote too little time to the long-term development of our company. After all, our role as regional grid manager is also changing due to the energy transition. Data are a case in point.

> ‘Data streams play an important part in a smart energy system.’

Those data need to be collected, verified and interpreted. We need data as management information for our assets. In addition to the physical layer of assets (cables, transformers, pipelines, stations), a digital layer is being superimposed that we require in order to monitor the energy streams through our grids, which enables us to make smart investments in our grids. This digital layer also allows us to control those energy streams more effectively in order to improve our asset deployment. For this new, digital mode of grid management, that we require new skills and roles. Our responsibility for ensuring the supply security and affordability of our energy system will continue to grow. As a result, we will work on those new skills as part of the Strategic Initiative 'System operator'.

Customer-oriented connections

The energy transition is accelerating. This trend is also reflected in the 20% increase to the number of requests for connections in 2019. In combination with changes in our organisation and high client expectations, this reason is why customer satisfaction is not yet at the desired level. We need to become more agile, work more efficiently and maintain close contact with our clients in order to address as well as manage their expectations. These aspects are the core of the Strategic Initiative 'Customer-oriented connections'.

Multidisciplinary

An important lesson of 2019 is that collaborating is hard work which also leads to concrete results. In 2019, Stedin committed strongly to collaboration with water companies. This partnership offers multiple advantages: we can save costs by collaborating on projects with water companies, while we can limit the inconvenience caused to our customers and to municipalities. The results that we have achieved by doing so have exceeded our expectations. We will accordingly continue this process in 2020.

Focus areas in 2020

The energy transition, our finances and the challenges in the area of capacitymanagement compel us to adopt a strong focus. Only through focus combined with transitioning together will we manage to complete the work successfully. For this purpose, we will concentrate our activities on four strategic initiatives in 2020.

The four strategic initiatives:

1. System operator
Supplying energy to clients requires predicting and managing energy streams. Given the continually growing share of solar power and wind energy, this process is becoming more and more difficult. Increasingly, we are becoming a 'system operator' that considers energy streams at a system level; for instance, with regard to congestion. This approach to grid management is completely different from the one to which Stedin is accustomed. In addition, this shift entails consequences for existing and new roles in the market. An example is TenneT, which currently acts as system operator at the national level.

'The role of system operator is necessary because grid management is increasingly turning into capacity management.'

Resolving congestion, for instance, can be accelerated by interacting with the environment: influencing production and use. None of these options are possible without good internal and external information flows for analysis and prediction on the one hand and for managing capacity on the other. We need to adapt our organisation, processes, information flows and applications accordingly in 2020.

2. Customer-oriented connections
In 2019, we worked with this initiative on the organisational set-up of product lines. We will take this initiative a step further in 2020 and utilise the results achieved in 2019 within the areas of digitalisation and data management. While data management plays a crucial role in enabling continual improvement, digitalisation allows us to do our work more quickly, efficiently and cheaply with shorter lead times, higher customer satisfaction and lower costs.

3. Multidisciplinary
How can we minimise the inconvenience that our customers experience in connection with our activities? Opening up the street once instead of several times is the aim of the 'Multidisciplinary' programme.

We want to plan and combine underground activities for gas as well as electricity with activities relating to water and media, possibly supplemented by heat and sewerage. We will apply this working method throughout the Stedin service area, focusing initially on collaborating with the drinking water companies. This method produces significant savings.

4. Sustainable energy transition
We will continue to engage in dialogue, coordinated by municipalities and provinces, during the 2019–2021 period. Making sure that our talks are with the right people and on the right topics will allow us to improve insight into the consequences of choices, provide substantiated advice as well as influence decision-making. Based on this initiative, we will continue to build on and expand the range of the skills, products as well as services required for this purpose in 2020.

'As the sustainable energy transition initiative is a driver of activities, results are directly embedded in the business operations.'

Governance

In this section, we describe the governance roles within Stedin Group. The Dutch Corporate Governance Code is an important document for Stedin, regulating matters such as the relationship between management and supervision. In view of Stedin Group's societal role, it was decided to apply the Dutch Corporate Governance Code voluntarily, where possible.

Corporate Governance

Stedin Group

Stedin Group is the name of the Group comprising Stedin Netbeheer B.V., DNWG Groep N.V. and NetVerder B.V., among others entities. Stedin Holding N.V. heads the group structure and is, directly or indirectly, the director under the articles of association of all its subsidiaries. Stedin Holding N.V. is a two-tier board company and applies the full two-tier board structure, consisting of a Board of Management and a Supervisory Board. The Board of Management manages the Group; the Supervisory Board exercises supervision. The two boards act independently of each other.

The grid managers Stedin and Enduris act on a non-discriminatory basis, meaning that they do not favour one particular party over another.

The Corporate Governance Code and Stedin Group

Stedin Group sets great store by good corporate governance. Stedin Group naturally complies with the governance requirements arising for the grid operator from the Electricity Act and the Gas Act. The Dutch Corporate Governance Code (CGC) was drawn up for listed companies. Stedin Group is therefore not obliged to comply with it, as its shares are held by 44 Dutch municipalities. Stedin Group decided in 2018 to apply the CGC voluntarily, where possible. We are thereby emphasising our responsibility for the social aspects of doing business in the public domain.

The CGC is based on the ‘comply or explain’ principle. We therefore explain which principles in the CGC are not (or cannot be) applicable to Stedin Group. The principal departures from the CGC are connected with the fact that Stedin Group is not listed. Our shares are held by local and regional authorities, while a large part of our business activities is regulated. We are subject to supervision by the Netherlands Authority for Consumers and Markets (ACM), and we pursue a long-term strategy. Furthermore, the remuneration structure of the members of the Board of Management and Supervisory Board of Stedin Group is regulated by the Executive Pay (Standards) Act (Wet normering topinkomens, WNT).

The CGC is applied at the level of Stedin Group.

Departures from the CGC

- *Provision 2.1.9 Independence of the chairman of the Supervisory Board:* The previous chair of the Supervisory Board, Pieter Trienekens, had served as acting director of Stedin Netbeheer B.V. for two years. In view of his expertise, Stedin Group and its shareholders saw no impediment with regard to his position as chair of the Supervisory Board. With Doede Vierstra as the new chair from 1 February 2020, the deviation from Provision 2.1.9 of the CGC has ceased in this respect.
- *Provision 2.2.1 Maximum appointment and reappointment periods – management board members:* Members of the Board of Management are appointed as director under the articles of association by the Supervisory Board for a maximum period of four years. They can be reappointed for successive maximum terms of four years. Such reappointments are not limited within Stedin Group. This longer term helps Stedin Group to ensure the continuity of the Board of Management.
- *Provision 2.2.2 Appointment of supervisory board members*: Within Stedin Group, Supervisory Board members are appointed for a term of four years and can be reappointed for a maximum of two additional four-year terms. These longer periods of appointment and reappointment help to ensure the continuity of the Supervisory Board.
- *Provision 2.2.3 Publication of press release upon early retirement of supervisory board members*: Issuing a press release as standard practice does not serve a public interest. The Board of Management does so if required by circumstances. It goes without saying that Stedin Group informs its shareholders about any early retirements.
- *Provision 2.3.2 Establishment of committees:* A combined Selection, Remuneration and Appointments Committee has been established within Stedin Group for practical reasons.
- *Provision 4.2.3 Meetings and presentations*: The shares of Stedin Holding are not listed; they are held by 44 municipalities. However, Stedin Group has issued bonds that are listed on the stock exchanges of Luxembourg and Amsterdam. Once a year, after the publication of its full-year results, Stedin Group organises a call for its investors. This call is publicly announced in advance to the investors. After the meeting, the presentations are posted on Stedin Group's website.

We depart from the provisions referred to below because the two-tier board structure applies, because the shares of

Stedin Group are held by 44 Dutch municipalities and are therefore not listed, and because the governance structure of Stedin Group is different (two-tier and not one-tier).

- 2.1.3 Executive committee
- 2.8.2–2.8.3 Takeover bid
- 3.1.3 Remuneration – executive committee
- 3.3.2–3.3.3 Remuneration of supervisory board members in shares and share ownership of supervisory board members 4.2.3–4.2.4 and 4.2.6 Analysts' meetings and anti-takeover measures
- 4.3.3 Cancelling the binding nature of a nomination or dismissal
- 4.3.4 Voting right on financing preference shares
- 4.3.5 Publication of institutional investors' voting policy
- 4.3.6 Report on the implementation of institutional investors' voting policy
- 4.4 Issuing depositary receipts for shares
- 5 One-tier board structure

The Board of Management monitors the operation of the internal risk management and control systems, and annually performs a systematic assessment of the design and operation of the systems. This monitoring covers all material control measures relating to strategic, operational, compliance and reporting risks. This is described in detail in the Risk management section and the In-control statement.

Governance roles

Board of Management

Stedin Group's Board of Management is responsible for the performance of Stedin Group and all subsidiaries within the group structure. Thus, the Board of Management determines the long-term strategy and the company's operational as well as financial objectives and designates the preconditions for delivering the strategy. In performing its duties, the Board of Management carefully weighs all interests, including those of customers, shareholders, employees, providers of capital and society in general. The Board of Management has defined customer and cultural values that contribute to a culture directed at long-term value creation.

An allocation of duties has been agreed within the Board of Management, which does not detract from the collective responsibility of the Board of Management as a whole. The Board of Management remains collectively responsible for all decisions. The division of duties within the Board of Management is decided (and if necessary changed) by the Board of Management, subject to approval by the Supervisory Board. Both the Board of Management as a whole and its individual members are authorised to represent the company. The internal Governance and Authority Manual sets out the procedure for obtaining mandates to represent Stedin Group and its subsidiaries externally. It also includes, for instance, threshold amounts for the performance of legal acts and other acts on behalf of Stedin.

Terms of reference of Board of Management

In addition to legal requirements and the articles of association, the Board of Management is also bound by the terms of reference of the Board of Management. These terms of reference complement those requirements, and include the division of duties, responsibilities and procedures of the Board of Management. The terms of reference adhere to the principles and best practices of the Dutch Corporate Governance Code, insofar as they are applied by Stedin Group. The most recent version of the terms of reference of the Board of Management, of 3 July 2018, has been posted on the website of Stedin Group. The same applies to the terms of reference of the Supervisory Board and its committees.

Appointment and dismissal

Members of the Board of Management are appointed as director under the articles of association by the Supervisory Board for a maximum term of four years. They can be reappointed for successive maximum terms of four years. The Supervisory Board is authorised to suspend or dismiss members of the Board of Management.

Strategy Management Team

Apart from the members of the Board of Management, the members of the Strategy Management Team (MT) also include the Asset Management, HR and Strategy directors. Together with the General Counsel (who also serves as company secretary), the Strategy MT advises the Board of Management on monitoring and delivering the organisation's strategic objectives. Unlike the Board of Management, the Strategy MT is not a decision-making body itself. A favourable opinion issued by the Strategy MT will, as a rule, be endorsed by a decision of the Board of Management.

Strategic Coalition

In addition, there is a Strategic Coalition, in which more than twenty directors, managers and members of a Works Council delegation take part, aside from the members of the Strategy MT. To develop the strategy and its implementation, they meet several times a year in 1- and 2-day sessions for that purpose. In 2019, these meetings focused on inspiring examples from other businesses or sectors, on the business and control cycle as well as on the annual planning cycle. Various strategic topics were also considered in greater depth. The Strategic Coalition consists of eleven women and fifteen men.

Composition

In 2019, the Board of Management consisted of four members: a Chief Executive Officer (CEO), a Chief Operating Officer (COO), a Chief Financial Officer (CFO) and a Chief Transition Officer (CTO).

The Board of Management consists of three male members and one female member (the COO). This means that women make up 25% of the Board of Management. It is assumed that as soon as a vacancy arises on the Board of Management, this will provide an opportunity for a more balanced representation of men and women.

Supervisory Board

Stedin Holding N.V.'s Supervisory Board advises the Board of Management and exercises supervision on the policy of the Board of Management as well as the general performance of the company and its subsidiaries. The Supervisory Board also acts as employer of the Board of Management. Accordingly, the Supervisory Board appoints members of the Board of Management and the Supervisory Board can suspend or dismiss members of the Board of Management (in consultation with the General Meeting of Shareholders). This right is also stated in the company's articles of association. The Supervisory Board of Stedin Holding N.V. is also the Supervisory Board of the grid managers within the group, i.e. of Stedin Netbeheer B.V. and of Enduris B.V. This fact is also stated in the articles of association of both grid managers (and those of Stedin Holding).

Upon taking office, the Supervisory Board drew up terms of reference for its functioning. These apply in addition to the legal requirements and requirements under the articles of association. The terms of reference include provisions on the Supervisory Board's composition, committees, duties and powers, meetings and decision-making.

The Supervisory Board has two permanent committees, composed as follows as of October 2019:

- A combined Selection, Remuneration and Appointments Committee (SRA Committee). This committee consists of Pieter Trienekens, Hanne Buis (as from 21 September 2018), Jules Kortenhorst (until 1 February 2019) and Dick van Well. Dick van Well is the chair. He will be succeeded as chair by Hanne Buis in the course of 2020.
- An Audit Committee, consisting of Theo Eysink, Annie Krist and Dick van Well. Theo Eysink is the chair.

The committees have their own meetings in preparation for the full Supervisory Board meetings. The committees report verbally in the Supervisory Board meetings and/or present their draft minutes. The recommendations of the committees form the basis for decision-making in the meetings of the Supervisory Board. The Audit Committee and the SRA Committee each have separate terms of reference, setting out provisions on their functioning. The terms of reference can be consulted on the Stedin Group website.

The members of the Supervisory Board are appointed by the General Meeting of Shareholders, after being nominated by the Supervisory Board. Account is taken in connection with nominations and appointments of the nature of the company, its activities and the desired expertise as well as background of the Supervisory Board members in accordance with the profile adopted for the size and composition of the Supervisory Board.

Supervisory Board members are appointed for a term of four years and can be reappointed for a maximum of two additional 4-year terms. The Supervisory Board can suspend members of the Supervisory Board. The Enterprise Division of the Amsterdam Court of Appeal can dismiss members of the Supervisory Board. The General Meeting of Shareholders can withdraw its trust in the full Supervisory Board or in individual Supervisory Board members.

The members of the Supervisory Board retire periodically in accordance with the retirement schedule that it has drawn up in order to avoid, as much as possible, too many Supervisory Board members retiring simultaneously. The retirement schedule shown below applies as from 21 September 2019.

Composition

The Supervisory Board has temporarily consisted of six members since September 2019, two of whom are women; from February 2020, the Supervisory Board consists of five members and the ratio of men to women is 3:2. With this ratio of men to women, the Supervisory Board complies with the diversity requirement. In addition, a variety of age categories are represented in the Supervisory Board. The search for new Supervisory Board members deliberately targeted greater diversity in terms of sex, partly by expressly designating this in the profile in advance and by communicating this aim to the recruitment and selection agency. Lastly, diversity in the composition of the board is also included in the annual evaluation of the Board of Management and the Supervisory Board.

Schedule of appointments and retirements

Name	Appointment or reappointment	Due to retire in
Mr P. E.G. (Pieter) Trienekens	6 Februari 2019	1 February 2020
Mr D.G. (Doede) Vierstra	20 September 2019	20 September 2023
Ms H.L. (Hanne) Buis	21 September 2018	21 September 2022
Ms A.J. (Annie) Krist	13 April 2018	13 April 2022
Mr. T.W. (Theo) Eysink RA	30 January 2017	1 Februari 2021
Mr D (Dick) van Well	30 January 2017	1 Februari 2021

Internal audit function

The internal audit function (IA function) is performed within Stedin Group by the Internal Audit department, a team of independently operating internal auditors. Internal Audit supports the organisation by providing insight, advice and supplementary assurance on the extent of risk management.

Internal Audit is part of the CEO's responsibilities and has direct access to the Audit Committee as well as to the external auditor. The Internal Audit manager attends the meetings of the Audit Committee. The Audit Committee supervises the IA function and advises the Supervisory Board on its performance.

Each year, Internal Audit draws up an audit plan that is based on a risk analysis and interviews with senior management as well as the Board of Management. It also incorporates the input of the Audit Committee and the external auditor. Internal Audit submits the annual audit plan for approval to the Board of Management and then to the Supervisory Board.

Internal Audit reports periodically to the Board of Management and the Supervisory Board on audit-related matters, such as significant findings, the follow-up of recommendations and the implementation of the audit plan. Internal Audit also informs the external auditor about this matter.

The external auditor

Deloitte Accountants B.V. is the external auditor of Stedin Group. The external auditor attends all meetings of the Audit Committee. The external auditor also annually attends the Annual General Meeting in which the financial statements are adopted.

Integrity

Code of conduct

A safe working environment as well as ethical behaviour among employers and employees are important to Stedin Group. We have therefore laid down our standards and values in a code of conduct. The code covers the desired conduct between employees themselves, but also in contacts with external parties such as customers, shareholders or regulators. Violations of human rights, bribery and other forms of corruption will not be tolerated.

The code of conduct has been elaborated in guidelines for a range of specific topics, including competition, privacy and social media. The code of conduct of Stedin Group and the guidelines are available on the Group's website, in line with the Corporate Governance Code. DNWG Group applies its own code of conduct based on similar principles.

The Compliance Officer held ten integrity sessions at various locations in 2019. Articles focusing on integrity risks also appear regularly on the Intranet.

Privacy

Treating personal data with due care is important to us at Stedin Group. We operate on the basis of the three lines of defence model to ensure this privacy. This model comprises an operational first line, an advisory/supporting second line and a monitoring third line. The privacy coordinators working in each department are the first line in this model. The Privacy Office is active as adviser and provides support to the organisation from the second line. Lastly, the Data Protection Officer provides privacy advice to management on an independent basis and performs the monitoring function as internal supervisor.

Privacy concerns the protection of personal data and is laid down in European privacy laws. With a view to complying with these applicable laws, Stedin Group's Privacy Office elaborated the privacy policy into practical guidelines with corresponding feasible tools in 2019.

Reporting Facilities

Stedin Group has separate reporting facilities for security and integrity incidents. This is where employees can report actual or suspected instances of non-ethical behaviour or security incidents in the work environment. Non-ethical conduct is also understood to comprise bribery, other forms of corruption or human rights violations. Security incidents in a work setting may concern both data protection and physical security. Integrity incidents are handled on the basis of the Guideline for Integrity Incidents and Abuses. In 2019, Stedin Group (excluding DNWG) received 344 reports at the reporting facilities regarding possible violations of the code of conduct. To date, 63 reports have been found to contain an integrity element. None of these had a discriminatory element within the meaning of the discrimination article.

Confidential advisers

Employees with integrity issues can also contact one of the organisation's confidential advisers. As in 2018, there were three confidential advisers at Stedin in 2019. DNWG has four confidential advisers. Confidential advisers have an obligation of confidentiality and never act on their own initiative or without the approval of the employee concerned. A confidential adviser receives a fee for this work.

External report

If an employee believes that an abuse within the company has not been addressed or not been addressed adequately in accordance with the internal whistleblower procedure, and if the abuse concerned is relevant to society in general, the employee can opt to report it to the external House for Whistleblowers. The whistleblower procedure has been posted on Stedin Group's website.

Supply chain responsibility

In 2019, we extended the material topic about purchasing materials and services from 'sustainable purchasing' to 'social responsibility in the supply chain'. This extension does greater justice to our One Planet ambitions regarding CO_2 emissions, mobility, raw materials and inclusive society. With a purchasing volume of € 810 million per year in the Netherlands, we have a significant impact on this area.

Stedin Group expects its suppliers to demonstrate an ethically responsible attitude in dealing with resources and people alike. By means of purchase conditions, framework contracts, tendering criteria and the tightened version of the Stedin Supplier Code of Conduct as issued at the end of 2019, we safeguard compliance with laws and regulations in the field of socially responsible purchasing at our suppliers. By signing our Code of Conduct, they commit to the basic principles concerning human rights, working conditions, fair and honest business practices (including the prevention of fraud and corruption), safety, integrity as well as to our One Planet goals. We also expect our suppliers to focus closely on whether their suppliers and the third parties that they engage comply with national or international laws and regulations as well as our Code of Conduct.

Our Code of Conduct is based on the OECD (Organisation for Economic Co-operation and Development) guidelines, the Universal Declaration of Human Rights as well as the labour standards and working conditions drawn up by the International Labour Organization.

The principal changes in the tightened Stedin Supplier Code of Conduct are the greater emphasis on human rights as well as the prohibition of materials which are sourced in areas with armed conflicts and which are often traded illegally.

Stedin Group recognises that suppliers are at differing stages of development and seeks to build strong relationships based on equality. Where necessary, we develop solutions jointly with our suppliers to address societal challenges.

Supply chain risk analysis

Stedin Group carried out a Potential Risk Analysis in 2019 on the basis of CSR Netherlands' CSR Risk Check tool. The criteria, which are based on the OECD guidelines, relate to fair business practices (such as preventing fraud and corruption), human rights & ethics, labour laws and the environment. Our top 50 suppliers (including two suppliers added in 2019) of products that are essential for our operations (such as cables, pipes, transformers, smart meters and workwear) have been given a score that reflects the potential risks. The score is based on the products that we procure from them and the country of origin of those products. This top 50 represents € 160 million in purchasing volume. Of the primary materials that we purchase from these 50 leading suppliers, 97.4% comes from Europ, 2.5% from Asia and 0.1% from North America.

From the risk analysis based on the CSR Risk Check tool, we have gained insight into the risks facing our supply chain. This analysis has taught us that 18 suppliers from the top 50 run a potential risk with regard to freedom of association, 7 suppliers from the top 50 run a potential risk of child labour within the chain and 21 suppliers from the top 50 run a potential risk of forced labour. It is often the case that these potential risks occur further upstream and derive from the country of origin or the nature of the product. The fact that we are now aware of these potential risks enables us to take appropriate action together with the supplier.

The risk analysis is utilised in two ways:

- firstly, as a guideline for buyers to draw up selection and award criteria. For instance, if a contract expires, we can adapt the award and selection criteria when inviting tenders for these products in order to reduce the potential risks. We also monitor this matter closely in invitations to tender that will be issued in 2020;
- secondly, we use the analysis to determine the existing suppliers at which we want to perform audits and/or assessments in 2020. We do so at the suppliers with the highest scores in the Potential Risk Analysis. The aim is to ascertain proper compliance with our Stedin Code of Conduct. If not, the supplier is given an opportunity to mitigate those risks by implementing an improvement plan. Should this plan prove to be insufficiently successful, we will exclude the supplier concerned. In 2020, we will extend the Potential Risk Analysis to our other suppliers.

The Purchasing department has a clear insight into the corporate social responsibility criteria that are applied in new tendering procedures and into the extent of suppliers' compliance with them. As a result, it is able to manage for improvements continually.

Biographical details of members of the Board of Management of Stedin Group

Mr M.W.M. (Marc) van der Linden
Chairman / CEO

Marc van der Linden (b. 1972) was appointed chair of the Board of Management with effect from 1 February 2017. Prior to that, he had been a member of the Board of Management of Eneco Holding N.V. since December 2012. He joined Eneco in 1997 and held various positions, including as Director of Eneco Energy Projects, Director of Eneco Installation Companies and Director of Eneco Wind. Previously, Marc worked at Van Gansewinkel Group. He studied Economics at Tilburg University.

Areas of responsibility: Strategy, Corporate Affairs, HR, Communication, Internal Audit.

Other positions: Chairman of Netbeheer Nederland, member of Cyber Security Board Netherlands, member of the Economic Board for South Holland, member of the Advisory Board of Technisch College Rotterdam and member of the Climate Agreement on Industry Infrastructure Task Force.

Mr D. (Danny) Benima
Member / CFO (from 1 January 2019)

Danny Benima (b. 1978) is the CFO and a member of the Board of Management of Stedin Group. Prior to that date, he worked at Arcadis as CFO for Southern Europe. In the past years, he held various financial positions at Arcadis and Stork. Danny studied International Management (HES Amsterdam) and Business Administration with Financial Management as specialisation (Nyenrode). Danny is a Registered Controller (Dutch 'Registercontroller', Tilburg University).

Areas of responsibility: Control & Risk, Finance & Accounting, Purchasing, Treasury.

Other positions: Board member of Utility Connect

Ms J.A.M. (Judith) Koole
Member / COO

Judith Koole (b. 1969) was appointed member of the Board of Management with effect from 1 February 2017. Prior to that, she was Customer and Market Director at Stedin Netbeheer B.V. She joined Stedin in 2012, and held positions including Programme Coordination Manager and manager of ReVisie (integration of Stedin/Joulz). Previously, she worked at Delta and at SITA (SUEZ) in line management positions with final accountability. She studied both French and Business Administration at Radboud University in Nijmegen.

Areas of responsibility: Malfunctions & Maintenance, Construction & Replacement, Meter Cabinet & Connection, Customer & Market, VGMK (Safety, Health, Environment and Quality).

Other positions: Member of the Supervisory Board of N.V. Westerscheldetunnel.

Mr D. (David) Peters
Member / CTO

David Peters (b. 1980) was appointed member of the Board of Management as Chief Transition Officer with effect from 1 January 2018. Since May 2015, he held the position of Strategy Director at Stedin, and was responsible for strategy and innovation. Until May 2015, he worked at Boston Consulting Group in the Netherlands as well as abroad on strategy and organisation issues, especially in the energy sector. He was a member of the National Think Tank in 2006. He studied Applied Physics at Eindhoven University of Technology and Applied Ethics at KU Leuven.

Areas of responsibility: Data Office, Change Office, Asset Management, Innovation, NetVerder, DNWG, IT.

Other positions: Board member of Stichting Zeeuwse Publieke Belangen, chairman of the Supervisory Board of USEF, governing board member of ElaadNL, board member of EDSO.

All members of the Board of Management of Stedin Group have Dutch nationality.

The importance of our material topics is reflected in the other positions in which the members of our Board of Management serve and the bodies in which they are active.

Biographical details of members of the Supervisory Board

Mr P.E.G. (Pieter) Trienekens (chair until 1 February 2020)

Pieter Trienekens (b. 1950) was acting managing director at Stedin Netbeheer B.V. from 2014 to 2017. Prior to this, he worked as a self-employed consultant. From 1986 to 2011, he worked at Nederlandse Gasunie, holding various positions including that of member of the Management Board. His previous positions included that of policy advisor at the Ministry of Economic Affairs. He also chairs the Supervisory Board of Cuculus GMbH in Ilmenau, Germany and is a member of the Supervisory Board of DNV GL Energy in Arnhem.

Mr D.G. (Doede) Vierstra (from 20 September 2019, chair from 1 February 2020)

Doede Vierstra (b. 1958) is a director on behalf of the Enterprise Division of the Amsterdam Court of Appeal and chairman of the Investment Committee of the Friesland Clean Energy Fund (FSFE). In the past, he was chairman of the WENB (Energy and Utility Companies Employers' Association). He is therefore familiar with the challenges that Stedin Group faces in connection with the energy transition. He acquired his ample experience with public stakeholders, including public shareholders, in his work as CFO of Nuon as well as in other positions.

Mr J.T.H.M. (Jules) Kortenhorst (until 1 February 2019)

Jules Kortenhorst (b. 1961) was a member of the Supervisory Board of Stedin Netbeheer B.V. from 2013 to 2019. He was a member of the House of Representatives for the Christian Democrats (CDA) from 2006 to 2008. Previously, he worked in international business, including for Shell. As a member of the House of Representatives, Jules worked on innovation policy and other areas. After leaving the House, he served as director of the European Climate Foundation until 2011. In 2012, he resumed his entrepreneurial activities. Since September 2013, he has been CEO of the Rocky Mountain Institute, a think tank in the US that focuses on the energy transition.

Ms A.J. (Annie) Krist

Annie Krist (b. 1960) commenced her career at N.V. Nederlandse Gasunie in 1987. At the end of the 1990s, she was a member of the Gasunie team that was responsible for the commercial, technical and IT modifications resulting from the deregulation of the gas market. In 2005, she joined the management team of Gasunie Transport Services. From 2008 to 2011, she was Director for Strategy and Participations. On 1 July 2011, she was appointed as Managing Director. From 1 May 2016 to 1 April 2017, Annie was a member of the Executive Board and CEO of Gasunie Transport Services. She was appointed as CEO of GasTerra with effect from 1 April 2017.

Mr D. (Dick) van Well

Dick van Well (b. 1948) served as member of the Supervisory Board of Stedin Netbeheer B.V. from 2012 to 2017. From 1998 to October 2010, he chaired the Management Board of construction company Dura Vermeer, where he had worked since 1973 and had held various positions. His other positions include that of member of the Supervisory Board of Dura Vermeer Groep N.V. and of APG Groep N.V. Mr Van Well is also a director of the Stichting Continuïteit Feijenoord (Feijenoord Continuity Foundation).

Mr T.W. (Theo) Eysink

Theo Eysink (b. 1966) started his career at Arthur Andersen, after which he worked in financial positions at KLM Catering, Spuigroep and Electrabel between 1996 and 2006. From 2006 to 2010, he was VP Finance at Bombardier Transportation Holding, before being appointed CFO at Stork Technical Services. In 2012, he became EVP Corporate Control at KPN and with effect from 1 May 2018, he was appointed CFO of the Business Market division of KPN. He has supervisory experience in the public and semi-public sector. Mr Eysink is also a member of the Supervisory Board of Vesteda Investment Management B.V.

Ms H.L. (Hanne) Buis

Hanne Buis (b. 1976) is Managing Director of Lelystad Airport, which is part of Royal Schiphol Group. Before being appointed as Managing Director, she held various positions at Amsterdam Airport Schiphol, where she managed complex operational processes. As director of an airport, she knows what it takes to manage a company that faces major changes with an impact on the environment. She also has extensive experience of working with various local and regional authorities as well as with the central government and she is a member of the Supervisory Board of the Netherlands Bach Society.

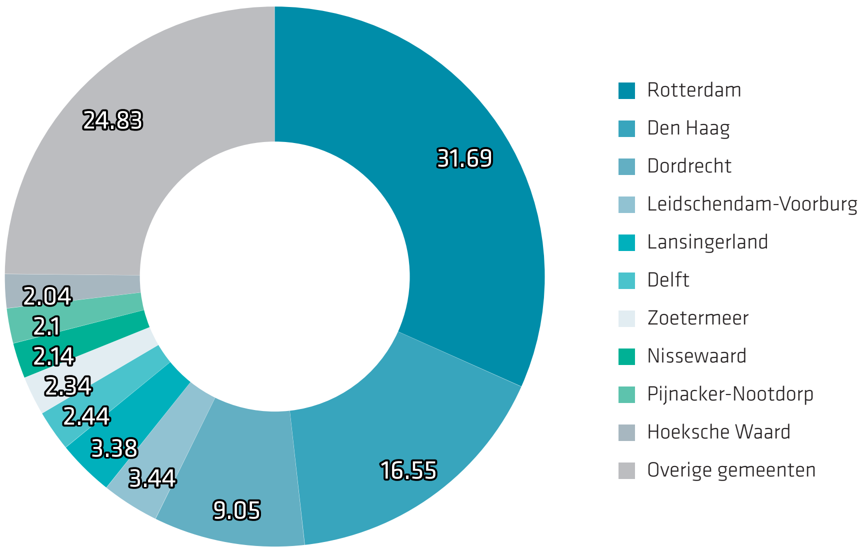
All members of the Supervisory Board of Stedin Group have Dutch nationality.

Shareholders

Together with our customers, shareholders and partners, we strive to foster sustainability in our social environment. With the support of our shareholders (44 Dutch municipalities in 2019), we are delivering on the sustainable course that we have charted.

Stedin Holding N.V.'s authorised share capital is divided into 20 million ordinary shares. No preference shares have been issued. Each share entitles its holder to one vote. No depositary receipts for shares have been issued. There are no usufructuaries or pledgees of shares with voting rights.

Municipalities holding more than 2% of the shares



Municipalities holding less than 2% of the shares

Aalsmeer	Goeree-Overflakkee	Papendrecht
Achtkarspelen	Gorinchem	Ridderkerk
Alblasserdam	Haarlemmermeer	Rijswijk
Albrandswaard	Hardinxveld-Giessendam	Schiedam
Ameland	Heemstede	Schiermonnikoog
Amstelveen	Hellevoetsluis	Sliedrecht
Barendrecht	Hendrik Ido Ambacht	Uithoorn
Bloemendaal	Krimpen aan den IJssel	Vijfheerenlanden
Brielle	Krimpenerwaard	Westbetuwe
Capelle aan den IJssel	Molenlanden	Westvoorne
Castricum	Noardeast-Fryslân	Zandvoort
		Zwijndrecht

‘With the support of our shareholders, we are delivering on the sustainable course that we have charted.’

Risk management

Stedin Group regards managing risks and opportunities in order to achieve its strategic objectives as a significant line responsibility. The risks and opportunities are therefore an integral part of the annual planning cycle. This approach helps Stedin Group to purposefully deal with uncertainties (risks and opportunities) in attaining its objectives.

Risk governance

In developing and executing Stedin Group's strategy, the Board of Management devotes extensive attention to the risks and opportunities associated with that strategy. The Board of Management has final responsibility for the execution of risk management, together with the management of the various business units. They are supported by support departments specialising in functional areas, such as Corporate Risk Management; Safety, Health, Environment and Quality (VGMK); Business Continuity Management; Security Office; Corporate Affairs and Compliance & Integrity. In addition, the Asset Management line department is tasked with preparing proposals for replacement investments based on a risk analysis, for which the ISO-NTA 8120 (ISO 55000) standard is applied. The operational asset risks are described in the Quality and Capacity Documents (2018-2020 investment plan) for Electricity, and Gas. The 2020 - 2022 investment plan is available from mid-June on www.stedin.net. Internal Audit performs audits and reports on the results to the Board of Management as well as the Supervisory Board's Audit Committee. A detailed description of risk governance is also available on our corporate website.

Risk management process

Stedin Group's Enterprise Risk Management (ERM) framework covers both long-term and short-term uncertainties. We based the design of this framework on the COSO-ERM framework and the ISO 31000 standard. The risk management process is a permanent part of the annual standard business planning and control cycle.

Long-term uncertainties

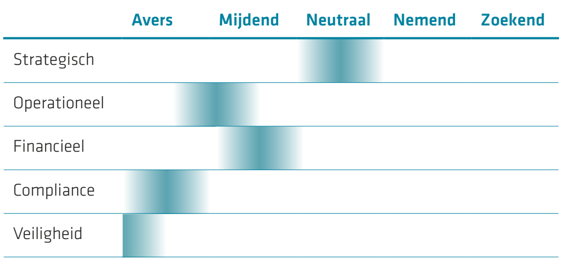
The risk management process regarding long-term uncertainties encompasses both risks and opportunities that constitute uncertainties in delivering the long-term strategy. Developments with regard to these uncertainties are covered by updates and reports once every quarter. These long-term uncertainties also serve as input in the selection of strategic initiatives, are part of the financial-strategic forecasts and are incorporated in the annual planning process. In this process, the long-term uncertainties are addressed as much as possible in the planning.

Short-term uncertainties

Risks and opportunities as well as the associated controls with regard to short-term uncertainties are identified. These are linked to the business and departmental objectives set out in the departmental plans for 2020. This information is gathered and updated at least once a year. We report on developments in these risks and the effectiveness of the controls applied to the Board of Management via monthly business unit reviews. The departmental management periodically reviews by means of self-assessment whether the controls applied to those risks are effective, in connection with the 'Jointly in Control process'. In addition, potential improvements are identified and actions are defined. The outcomes of these self-assessments are reported twice a year to the Board of Management in a Letter of Representation. They are one of the inputs that form the basis for the In-control statement of the Board of Management.

Risk tolerance

We have to incur a certain degree of risk in order to achieve our organisational objectives. The extent to which we are prepared to be exposed to risks (the risk tolerance) differs for each risk category:



With regard to both risks and opportunities, Stedin Group is continually seeking a balance between its role in society, the available (financial and other) resources and the environment.

- **Strategic – Neutral**: Stedin Group is prepared to take moderate risks to achieve its mission, vision and strategic objectives.
- **Operational – Avoiding**: Stedin Group is risk averse in connection with risks concerning supply security. In doing so, Stedin Group seeks a balance between supply security and (social) affordability.

- **Financial – Avoiding**: Stedin Group is a capital-intensive enterprise. In order to ensure that our service provision to customers remains both reliable and affordable, we aim for an A-rating from Standard & Poor's. We do not accept any risks that may endanger that rating. The reliability of our financial reporting is one of the preconditions for retaining this rating.
- **Compliance – Averse**: We perform a regulated task in the energy world. We therefore seek to comply with all applicable laws and regulations.
- **Safety – Averse**: The electricity and gas infrastructure is potentially dangerous (and can pose a threat to lives). We have the lowest possible risk tolerance in connection with the safety of our employees and our environment.

Developments in 2019

Stedin Group continued the integral risk management in 2019, which focuses on long-term risks and opportunities. We collaborated more closely within the various risk disciplines such as Cybersecurity and Compliance in 2019. The long-term risks and opportunities are a fixed element in managing the organisation as well as in developing annual plans. These long-term risks and opportunities also served as input for the financial-strategic forecast. We translated the potential impact of those uncertainties into potential financial effects for that purpose.

We have taken the first steps to translate the risk tolerance model created in 2018 into sets of tools and risk dialogues. In those risk dialogues, we discuss the level of risk tolerance and relate it to the current level of risk. In 2019, we also implemented the improvement process proposed in 2018 to formalise risks and controls that may affect financial reporting. Lastly, we held risk and control workshops in 2019 on short-term risks as well as opportunities at a departmental level and to raise risk awareness within the organisation.

Corporate Risk Management

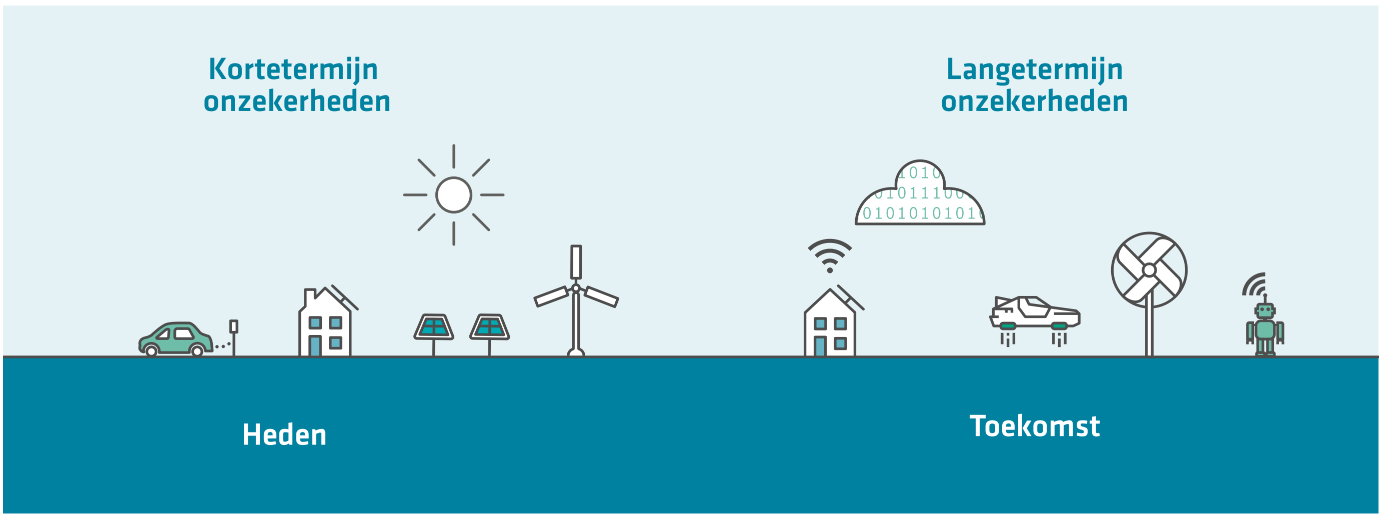
In 2019, based on the 'Three Lines of Defence' model, Stedin continued developing the structure of the Corporate Risk Management department. In this model, the first line (Business), the second line (Risk Management) and the third line (Internal Audit) are interlinked, so as to fulfil the tasks and responsibilities in the field of risk management more effectively. We also invested in greater specialisation, which enables us to increase knowledge and awareness of the various risk areas.

Implementation of new risk management application

A new risk management application was implemented in 2019. This implementation was done jointly with stakeholders to ensure that we all work in a uniform way. The application makes it possible to facilitate the 'Jointly In Control process' within Stedin and creates greater standardisation. This application is a significant step in purposefully dealing with risks in the organisation, maximising opportunities, and safeguarding the quality and safety of our work.

Formalisation of risks and controls relating to financial reporting

Stedin Group has a continuous programme called 'Jointly In Control'. Within this framework, further efforts were made in 2019 to identify the risks, processes and control measures related to financial reporting. The result is a new Control Framework for financial reporting. Improvements have already been made in 2019 in important areas, such as in the Tangible Fixed Assets and Financial Close processes. At the same time, the new lease accounting standards have been implemented. We did so on a collaborative basis with various departments within the organisation to ensure that we join



each other in a logical chain. During 2020, Stedin will implement the full Control Framework.

An important part of the Jointly In Control programme is that we also continue to learn and improve in a controlled way so as to remain not only in control but also efficient.

Approach to fraud risks

In collaboration with Compliance, Corporate Risk Management once again performed a fraud risk analysis during the past year, highlighting which of Stedin's activities are subject to the greatest fraud risks. On a regular basis, the Compliance Officer reports to the Board of Management and the Supervisory Board about any fraud detected.

Risks and uncertainties that had a major impact in 2019

A number of risks occurred in 2019 that had a major impact on operations within Stedin Group:

1. **Impact of increased TenneT rates in 2020:** The rates of the national grid manager TenneT will increase significantly in 2020 due to additional investments in the energy transition. Those new rates will be largely charged to all regional grid managers of the electricity grid. This additional cost item, which has a direct impact on Stedin's financial results, leads to an additional increase in the energy bill for households and businesses. Financial predictability is important for our customers and shareholders so they know what to expect. Together with the other regional grid managers and the industry association Netbeheer Nederland, we therefore submitted an opinion on the rate calculation to the Netherlands Authority for Consumers and Markets (ACM). Netbeheer Nederland, of which Stedin Netbeheer B.V. is part, is conducting talks with the ACM as well as the Ministry of Economic Affairs and Climate Policy to come up with joint directions for solutions.
2. **Nitrogen issue:** The nationwide issues concerning nitrogen emissions and the prohibition of construction activities have also affected major high-voltage projects, which incurred delays as a result. These projects have been rescheduled for 2020. The relevant developments are being followed very closely in order to anticipate them ahead of time.
3. **Accelerated replacement of grey cast iron pipes:** Following a gas explosion in The Hague with serious consequences,the regulator State Supervision of Mines (Staatstoezicht op de Mijnen, SodM) requested all grid managers to speed up the ongoing programme of replacing grey cast iron gas pipes. This acceleration requires additional investments. In connection with these activities, we are looking at opportunities to collaborate with municipalities and other parties to act jointly; for instance, when replacing sewers or water mains. This way, we will be able to limit the inconvenience for the environment. The sustainability ambitions for a gas-free built environment are among the matters that are expressly taken into account in executing this work.
4. **Asbestos in fitter's sealant:** During preparatory work in August 2019, an asbestos-containing material was found to have been used in order to seal joints in gas pipes. The asbestos was found in fitter's sealant from the 1960s and 1970s. Initial examination has shown that some of the sealant contains asbestos. As a precaution, all joints placed before 1975 for which fitter's sealant was used are viewed as possibly containing asbestos. After identifying traces of asbestos in the sealant, the grid managers immediately took appropriate safety measures. A supplementary investigation has been launched, whose goals include ascertaining where and when this asbestos-containing sealant was used. The investigation is currently ongoing.

For a description of the accidents in 2019, see Safety and security.

For an overview of the average downtime in electricity and gas supply, see Reliability of our grids.

For an overview of uncertainties concerning the smart meter, see High-quality products and services.

Outlook for 2020

In 2020, the Risk Management department will continue with its present approach. The expanded team will continue to step up its support for the organisation in performing strategic and operational risk assessments. The focus on financial risks will likewise be tightened. Furthermore, the Risk Management department will provide more active support in utilising the proposals for improvement within the organisation by recommending specific actions and monitoring their implementation. A number of steps are being taken to specify the risk tolerance further as well as to tighten the monitoring of risk tolerance and the reporting processes further.

The core objective of risk management is unchanged: to support the line in performing risk management. To do so, it is necessary to have a close-up view of the activities within the various departments. We will achieve this aim by means of account managers from risk management. There are several risk management functions within Stedin, such as information security, compliance, safety and legal affairs, so it is important to ensure the maximum comparability of methods and techniques. This approach facilitates a uniform insight into risk. We generally support it in terms of implementation with a risk management application developed in 2019. This process will allow us to increase the demonstrable degree of risk management further.

Impact coronavirus

At the time of publication of this 2019 Annual Report, farreaching measures are taken in the fight against the coronavirus.

The energy infrastructure is vital to our society. In this situation, too, we are taking all necessary measures to ensure our electricity and gas grid remains as reliable as ever. You can read more about the impact of the corona crisis in the chapter Subsequent events.

Most important risks and opportunities for Stedin Group in 2019

This section describes the most important risks and opportunities for Stedin Group. For information about our financial reporting risks, see Judgements, estimates and assumptions as well as Management of financial risks in the Financial Statements.

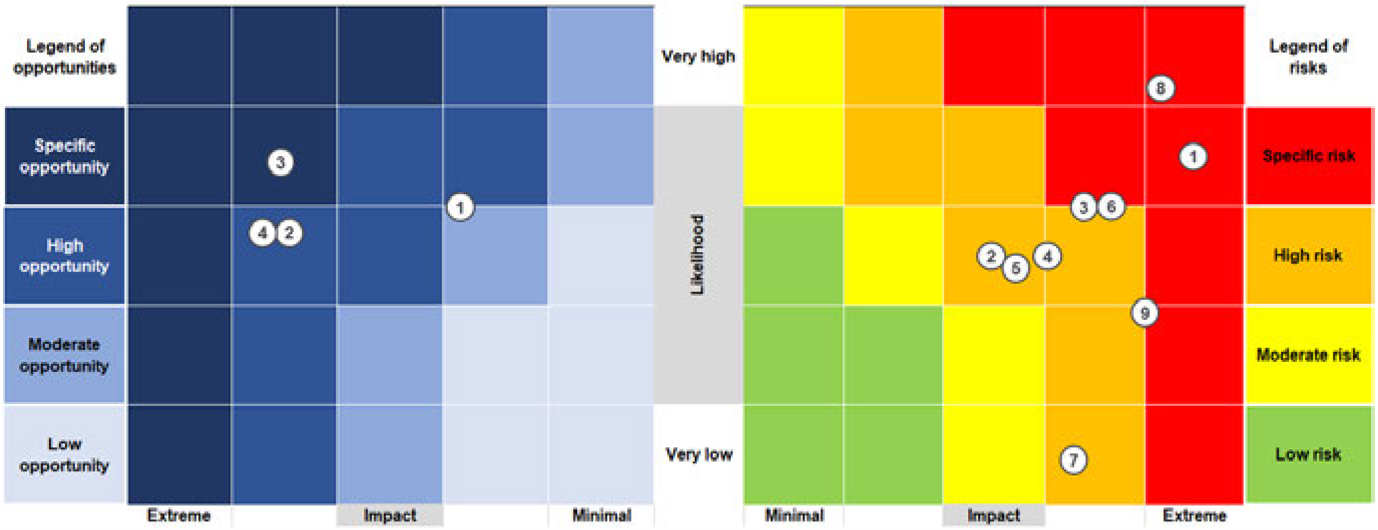
Connection of risks and opportunities to strategic spearheads and material topics

			Strategic spearheads			
Risk	Category	Material topics	Improved grid management	Facilitating the energy transition	Sustainable business operations	Change from 2018
Cyberattack	Operational	Data security, privacy and cybersecurity – Supply security – Reputation	•		•	=
Unavailability of enough people with the required technical competences	Operational	Sufficient technical/IT staff – Training and development		•	•	↓
IT landscape insufficiently prepared for the future	Strategic	Smart grids, data technology and innovation		•	•	=
Agility of the organisation	Strategic	Organisation's capacity for change – Reputation	•	•	•	=
Uncertainties concerning changes in laws and regulations	Compliance	Stakeholder dialogue and environment Heat transition	•			=
Uncertainties concerning long-term financing	Financial	Economic, financial performance – Investing in infrastructure		•	•	=
Impact of accidents	Safety	Safety at work and in the environment – Reputation			•	=
Insufficient connection and transmission capacity	Strategic	Investing in infrastructure – Contributing to the energy transition – Customer satisfaction – Stakeholder dialogue and environment	•	•	•	+
Loss of communication network	Operational	Contributing to the energy transition – Reputation		•	•	↑
Opportunity						
Strategic supplier relationships		Stakeholder dialogue and environment Social responsibility in the supply chain		•		↑
Disruptive technologies and methods		Smart grids, data technology and innovation		•		=
Provide stakeholders and customers with more self-services		Contributing to the energy transition – Reputation – Customer satisfaction – Stakeholder dialogue and environment	•	•		↑
Building a future-proof IT landscape		Smart grids, data technology and innovation – Data security, privacy and cybersecurity	•	•		=

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

Categories of risks and opportunities

Stedin Group assigns its strategic risks and opportunities to five categories, from low to top. In evaluating risks and opportunities, we compare the likelihood of their occurrence with their potential impact on the achievement of our three strategic spearheads. This comparison led to the risk matrix below for 2019.



1. Strategic supplier relationships
2. Disruptive technologies and methods
3. Provide stakeholders and customers with more self-services
4. Building a future-proof IT landscape

1. Cyberattack
2. Unavailability of enough employees with the required (technical) competences
3. IT landscape insufficiently prepared for the future
4. Agility of the organisation
5. Uncertainties concerning changes in laws and regulation
6. Uncertainties of long-term financing
7. Impact of accidents
8. Insufficient connection and distribution capacity
9. Loss of communication network

Risks

Title of risk:	1 Cyberattack
Description of risk	As a result of its strategic location as well as its social and economic importance, the Stedin Group infrastructure is an attractive target for cyberattacks. A cyberattack can endanger the continuity of Stedin Group and society.
Risk tolerance	Avoiding
Change from 2018	=
Risk assessment	Top
How did we respond to this fact in 2019	Cybersecurity has been more strongly embedded in the business processes. We worked on knowledge, competences and resources in 2019, thus increasing Stedin Group's ability to withstand cybersecurity threats. Stedin Group's CEO is a member of the Cyber Security Board on behalf of the critically important sectors.

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

Title of risk:	② Unavailability of enough people with the required technical competences
Description of risk	Due to ageing and tightness in the labour market, there is a risk that we will no longer have enough staff with the required technical competences.
Risk tolerance	Avoiding
Change from 2018	↓
Risk assessment	High
How did we respond to this fact in 2019	The Strategic Personnel Plan provides us with new insights that improves our risk mapping. Jointly with our industry peers, we are addressing this challenge by developing a vision, exchanging initiatives and learning from each other. We have launched a review into strategic recruitment, recruitment abroad and position-based recruitment. Lastly, we have started a labour market advertising campaign.

Title of risk:	③ IT landscape insufficiently prepared for the future
Description of risk	Stedin Group needs an integral IT infrastructure in order to support the future primary processes and facilitate the energy transition.
Risk tolerance	Neutral
Change from 2018	=
Risk assessment	Top
How did we respond to this fact in 2019	A range of actions were initiated in the past year to set up the IT landscape for the future. For example, the transformation to cloud solutions was pursued in full. The speed of changes due to the energy transition, in combination with the digital transformation, is growing.

Title of risk:	④ Agility of the organisation
Description of risk	The culture and conduct of Stedin Group must change in accordance with the changes in the energy landscape so as to fulfil its role in the energy transition.
Risk tolerance	Neutral
Change from 2018	=
Risk assessment	High
How did we respond to this fact in 2019	The managers are important in successfully executing our strategy. Together with the Board of Management, they translated the strategy into actions for their teams during two kick-forward sessions in 2019. We retain new talent for Stedin by means of the programme for our management trainees (Makers of the Future). We also continue performance management to support the management qualities of our managers.

Title of risk:	⑤ Uncertainties concerning changes in laws and regulations
Description of risk	National or European governments may take undesirable decisions on the role of regional grid managers. This situation can lead to uncertainty about the implementation of our strategy.
Risk tolerance	Averse
Change from 2018	=
Risk assessment	High
How did we respond to this fact in 2019	Stedin Group closely follows developments in Europe and The Hague, and it is represented in the national lobby, preferably through the industry association Netbeheer Nederland. Our Regulation department participates in the European lobby. Stedin Group is aware of amendments to existing laws and new laws well in advance. In 2019, we devoted special attention to the dialogue with local authorities and other stakeholders on the future of the heating market. In addition, we focus very closely on the debate about the solutions to the problems with regard to sufficient grid capacity.

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

Title of risk:	⑥ Uncertainties concerning long-term financing
Description of risk	A regulation model that is not aligned with the financial challenges of the grid managers in the energy transition entails a risk of further cost increases with regulated revenues that do not increase at the same pace. This can endanger the availability of financing.
Risk tolerance	Avoiding
Change from 2018	=
Risk assessment	Top
How did we respond to this fact in 2019	To ensure that we can undertake the required investments, critically assessing the effectiveness of our own operations and responding to the developments of financial markets as well as laws and regulations remain necessary. This risk has also been discussed with our stakeholders (See Report of the Supervisory Board, Audit Committee). It became clear in 2019 that we will need to take far-reaching measures if the present regulatory regime remains unchanged, which is not desirable. We are in consultation with all parties involved, including the Ministry of Economic Affairs and Climate Policy as well as the Netherlands Authority for Consumers and Markets, both directly and within the framework of Netbeheer Nederland.

Title of risk:	⑦ Impact of accidents
Description of risk	Due to insufficient safety awareness and learning ability, there is a risk of unsafe situations. As a consequence, Stedin Group could suffer reputational damage and be subject to sanctions imposed by regulators.
Risk tolerance	Averse
Change from 2018	=
Risk assessment	High
How did we respond to this fact in 2019	Our multi-year safety programme is based on the principles of the High Reliability Organisation (HRO). We completed phase 1 'Raising awareness' in 2018 and we started on phase 2 'Updating knowledge'. The entire Stedin Netbeheer organisation obtained certification for level 3 of the Safety Culture Ladder in 2019. We commenced preparations for phase 3 'Embedding routines'.

Title of risk:	⑧ Insufficient connection and transmission capacity
Description of risk	If we fail to reinforce our grids soon enough, it is possible that we may not be able to provide transmission capacity for our customers. In that situation, we will be unable to comply with customers' requirements, customers will have to cancel their projects and this situation will delay the achievement of the climate objectives.
Risk tolerance	Neutral
Change from 2018	+
Risk assessment	Top
How did we respond to this fact in 2019	Stedin is party to all relevant Regional Energy Strategies, which ensures that the energy infrastructure is properly taken into account. We publish capacity maps so our customers know where potential bottlenecks may arise in the grid. In addition, we have adopted a more proactive investment approach and have drawn up 'Master plans' that provide insight into the infrastructure that is necessary to achieve the objectives by 2050.

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

Title of risk:	9 Loss of communication network
Description of risk	Due to uncertainties concerning the availability of our communication networks (GPRS and CDMA), there is a risk that we will be unable to read out information from the smart meters.
Risk tolerance	Avoiding
Change from 2018	↑
Risk assessment	Top
How did we respond to this fact in 2019	The frequency for CDMA has been renewed for only 4 years. We have lodged an objection to this short term with a view to the required long-term continuity. As regards GPRS, we are in extensive negotiations with the commercial telecommunication parties in order to extend the service provision of GPRS to beyond 2025. We are also working on a next communication platform (LTE-M) to replace GPRS.

Opportunities:

Title of opportunity:	1 Strategic supplier relationships
Description of opportunity	Strategic relationships with suppliers increase our responsiveness and improve our cost-effectiveness.
Change from 2018	↑
Opportunity assessment	High
How did we respond to this fact in 2019	The awareness of strategic supplier relationships increased further in the past year, partly due to incidents in the supply chain, and resulted in the creation of a Strategic Vendor Board.

Title of opportunity:	2 Disruptive technologies and methods
Description of opportunity	We see an opportunity to apply new technologies and utilise data effectively to improve the performance of our task within the energy system, boost our innovative potential, work more efficiently and facilitate the energy transition.
Change from 2018	=
Opportunity assessment	High
How did we respond to this fact in 2019	In 2019, we successfully experimented with hydrogen in the natural gas grid as well as local energy generation and exchange in combination with blockchain technology. We are also working with new models to make the heat transition transparent and manageable.

Title of opportunity:	③ Provide stakeholders and customers with more self-services
Description of opportunity	By assisting stakeholders and customers, and by giving them control, we enable them to improve the sustainability of the energy system.
Change from 2018	↑
Opportunity assessment	Top
How did we respond to this fact in 2019	We collaborate more intensively with customers, municipalities, housing associations, water companies and heating companies to improve the sustainability of the built environment. Stedin Group is aiming for a shared plan at a regional, urban and district level. In addition, Stedin is digitising its customer processes, as a result of which customers can take the helm themselves.

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

Title of opportunity:	④ Building a future-proof IT landscape
Description of opportunity	Stedin Group is increasingly becoming a data- and IT-driven organisation. By building a future-proof IT landscape, we are increasing our flexibility and our innovative potential.
Change from 2018	=
Opportunity assessment	High
How did we respond to this fact in 2019	The speed of changes due to the energy transition in combination with the digital transformation is growing. In order to keep pace with that speed, a change process was launched in the second half of 2019 to improve the IT structure and its positioning within the organisation.

+ New in 2019 / = Equal to 2018 / ↑ Increased relative to 2018 / ↓ Decreased relative to 2018

In-control statement

As the Board of Management, we are responsible for the adequate design and operating effectiveness of our risk management and control system. This system is aimed at achieving strategic and operational objectives, and at monitoring the reliability of our financial reporting and our regulatory compliance. The inherent limitations that apply to any internal risk management and control system must, however, be taken into account. As a result, we will never be able to guarantee absolutely that we will achieve our company objectives or that our processes (including the financial reporting process) will be free from errors, losses, fraud or violations of laws and regulations.

We evaluated the design and operating effectiveness of the system during 2019, and discussed this with the senior leadership team, the Board of Management and the Supervisory Board. Monitoring and evaluation took place based on business control reports containing an overview of operational risks and controls, business self-assessments resulting in Letters of Representation, and quarterly updates on strategic risks and opportunities. Account was also taken of the information from reports from the internal audit function and the external auditor. Despite the fact that the quality of our system of internal controls has increased, we acknowledge the need for further improvements to our system of internal controls as detailed in the Risk management section of this report.

We declare that:

• the report provides sufficient insights into any failings in the effectiveness of the internal risk management and control systems;

• the aforementioned systems provide reasonable assurance that the financial reporting does not contain any material inaccuracies;

• based on the current state of affairs, it is justified that the financial reporting is prepared on a going concern basis;

• the report states those material risks and uncertainties that are relevant to the expectation of the company's continuity for the period of twelve months after the preparation of the report.

Rotterdam, 23 March 2020

Board of Management,

Marc van der Linden, CEO (chair)

Danny Benima, CFO

Judith Koole, COO

David Peters, CTO

Report of the Supervisory Board

Report of the Supervisory Board

In this report, the Supervisory Board renders account on the performance of its activities in 2019.

During 2019, Stedin Group continued to strengthen its strategic role in the energy transition. Stedin is increasingly successful in coordinating the transition with its stakeholders and has a clear picture of its playing field. For example, Stedin is well represented in the developments concerning the Climate Agreement. The chair of the Board of Management has been appointed as a member of the advisory council of the Climate Agreement on Industry Infrastructure Task Force. His other positions include that of member of the Cyber Security Board Netherlands. We are seeing that the strategic choice for a 'focus on grid management' continues to demand considerable management attention for operations. In addition, specific attention was devoted this year to the strategic spearhead 'Sustainable business operations', particularly the objective 'Financially healthy'.

Topics

Disposal of non-regulated activities

Besides regular topics, there were various developments in 2019 that are worthy of note. One of these was the sale of Joulz Diensten; the activities within that part of the organisation were no longer aligned with the strategy of Stedin Group, whose focus has shifted to grid management activities. The Supervisory Board was closely involved in this process. In a diligent manner, which was coordinated with the Supervisory Board, it was established exactly which activities this concerned, how these could be unbundled, how the interests of customers and employees could be respected, and which parties would be suitable takeover candidates. This process eventually resulted in a successful sale to 3i Infrastructure on 30 April 2019.

Treasury

Both the Audit Committee and the Supervisory Board regularly devoted attention to treasury-related matters, such as the issue of a green bond in the autumn. We are pleased with the B rating for sustainability that we were awarded by the leading rating agency ISS ESG. Stedin Group is therefore among the top performers within its sector in Europe. We are seeing that investors attach increasing value to sustainable business operations in all areas.

Remuneration policy

Some details of the remuneration policy adopted in 2018 were modified as from 1 January 2019 within the framework arising from the Executive Pay (Standards) Act (Wet normering topinkomens, WNT). The changes concern the fixedexpense allowance and a periodic recalibration of the mobility policy.

From left to right: Theo Eysink, Pieter Trienekens, Hanne Buis, Doede Vierstra, Annie Krist, Dick van Well

Shareholders and long-term financing
The governance agreements made in 2018 have also had an effect on the annual planning process and shareholders' involvement in that process. By contrast to prior years, shareholders are given an early opportunity to issue advice on the regulated portion of Stedin Group's annual plan. The advice of the General Meeting of Shareholders on the 2019 Stedin Group Annual Plan 2019, regulated domain, was put to the vote in the Extraordinary Meeting of Shareholders on 6 February 2019. Partly in response to the matters discussed at that meeting, the management decided to correct the proposal for the intended dividend for 2019 on a once-only basis in consultation with the Supervisory Board. More information on this topic is provided in the Profit appropriation section in the financial statements.

A joint working group was also established that focuses on long-term financing. In this working group, Stedin and a delegation of the shareholders examine the possibilities for ensuring that the energy transition can continue to be financed in the long term, each assisted by their advisers. The Supervisory Board sets great store by constructive consultation between Stedin and its shareholders. The financing or pre-financing of the energy transition in the current regulatory model is a financial challenge for grid managers and hence for Stedin Group as well. This challenge places great demands on the organisation as well as on its shareholders.

‘In this process, ‘transitioning together' is a necessity and a challenge.’

The Supervisory Board welcomes the way in which both the organisation and the shareholders are stepping up to assume their responsibilities in this process. The Supervisory Board is closely involved in this matter. The Supervisory Board attaches great importance to the working group's basic objective of retaining Stedin Group's present credit rating (A-) in the future as well. The adoption of this basic objective by the shareholders during their meeting in September provides a clear indication that the importance of an affordable energy transition is also endorsed on their part.

Other important topics
Other noteworthy topics that required attention from the Supervisory Board in 2019 included the developments in the fields of data, heat and hydrogen; the Climate Agreement; the Control Framework; the granting of a licence to Utility Connect and the 2020–2025 Stedin Group Vision. Safety was also regularly discussed. It is good to see that the many efforts which have been undertaken as well as the focus on safety are reflected in an improvement of the safety metrics LTIR and RIF.

With regard to sustainability, the Supervisory Board is proud that Stedin issued its first green bond in November. In the opinion of the Supervisory Board, this issue fits well into Stedin Group's strategy of contributing to the increased sustainability of our society.

The Supervisory Board would like to express its appreciation for the way in which Stedin acted following the gas explosion at Jan van der Heijdenstraat in The Hague. By immediately looking to contact those affected and being there for them, Stedin embodied its role in society. We very much regret the fact that people were injured.

The Supervisory Board is systematically updated on progress on the strategy of Stedin Group and its strategic KPIs, which relates to financial as well as non-financial KPIs and objectives.

'The future of the gas grid' was the subject of an in-depth session for the Supervisory Board on 28 June. This subject was considered in detail at a strategic level; for instance, in connection with the test beds for gas-free areas as designated by municipalities. Extensive information was also provided on the multidisciplinary approach to underground projects, which is one of the strategic initiatives. Lastly, there was an instructive tour of the in-house training school, the switching centre and the Innovation Lab.

Stedin Group pursues long-term value creation by directing and managing its material topics. The Supervisory Board monitors the way in which the Board of Management implements this aim. In 2019, the material topics of Stedin Group were recalibrated and prioritised by the Board of Management (see ‘Stakeholders and materiality’). In its meeting of 9 December, the Supervisory Board discussed this recalibration and endorsed the adoption as well as the prioritisation of the material topics.

Lastly, in December 2019, the Supervisory Board considered in detail the 2020 Annual Plan and the financial multi-year planning. The Supervisory Board sees numerous challenges facing the organisation; applying focus, making choices, and managing the strategic initiatives are regular topics of discussion between the Supervisory Board and the Board of Management.

The Supervisory Board feels that it is being sufficiently involved in the developments in the business and the challenges facing Stedin Group. The Supervisory Board would like to express its appreciation for this to the Board of Management and the employees.

Working method and meetings

Six regular meetings of the Supervisory Board were held in 2019, several of which were held by telephone. On several occasions, decisions were taken outside a regular meeting, which were always confirmed at the next regular meeting, as prescribed in the Supervisory Board terms of reference. The Supervisory Board held brief consultations, behind closed doors, before the regular meetings; as a standard procedure, there was always room for evaluation after the meeting in the presence of the CEO. In addition, the chairpersons of the Board of Management and the Supervisory Board held regular consultations on the main issues in 2019.

The full Board of Management attended the Supervisory Board meetings. In addition, various members of management attended Supervisory Board meetings as guests. If a Supervisory Board member was unable to attend a meeting, this was due to other commitments and the member concerned provided his or her input in advance.

Suzanne van Nieuwenhuijzen-Ruijtenberg serves as company secretary. She has delegated part of her duties with regard to the Audit Committee to Jaap Versluis, Manager Business Control. Some of the duties for the Selection, Remuneration and Appointments Committee were delegated to Elise Reedeker, Corporate Affairs department. The agendas of the Supervisory Board meetings were prepared by the company secretary, in consultation with the chairs of the Board of Management and the Supervisory Board.

Attendance rate of Supervisory Board members at meetings

Name	Supervisory Board meeting	Audit Committee	Selection, Remuneration and Appointments Committee
Pieter Trienekens	100%		100%
Theo Eysink	83%	100%	
Dick van Well	83%	100%*	100%
Annie Krist	100%	100%	
Hanne Buis	100%		100%
Doede Vierstra	100%**		

* During the fourth quarter of 2019, Dick van Well became a member of the Audit Committee.
** Doede Vierstra became a member of the Supervisory Board on 20 September 2019.

Committees

The Supervisory Board has two committees: the Audit Committee as well as the combined Selection, Remuneration and Appointments Committee (SRA Committee). The committees prepare decision-making for the Supervisory Board in the area of responsibility concerned and advise the Supervisory Board. Decision-making takes place in a Supervisory Board meeting in which all members are present. All members of the Supervisory Board have access to the documents of the committees and the draft minutes of committee meetings are distributed in the next Supervisory Board meeting to be held, where they are discussed orally by the chair of the committee.

Audit Committee

The Audit Committee held four regular meetings in 2019. Those meetings are always attended by the CFO, the Internal Audit manager and the external auditor. The Compliance Officer attends as a guest at least twice a year. In addition to the regular topics, specific attention was devoted to long-term financing and treasury, the internal control framework and various internal audits.

On two occasions (in September and November 2019), the Audit Committee discussed the Internal Control Framework that Stedin is establishing. The Audit Committee welcomes the fact that this project has been initiated. It monitored this project during the year and saw that good progress was achieved. This topic will continue to require significant attention in 2020 as well.

Selection, Remuneration and Appointments Committee
The Selection, Remuneration and Appointments Committee held three live meetings in 2019 and one meeting by telephone. There were five formal moments of consultation with the delegation of shareholders, which concerned the amendment of the remuneration policy as well as the recruitment and selection of a new member of the Supervisory Board, who would also be the intended chair of the Supervisory Board. The remuneration of the Board of Management members and Supervisory Board members for 2019, which is in accordance with the adopted remuneration policy and which respects the limits of the Executive Pay (Standards) Act (Wet normering topinkomens, WNT), is described in the Remuneration report for 2019 section.

A new member of the Supervisory Board
The chair of the Supervisory Board was reappointed for one year, until 1 February 2020, in the General Meeting of Shareholders of 6 February 2019. With a view to the end of that period, the search commenced for a new member of the Supervisory Board, who would also take on the role of chair. This was done in consultation with the Works Council and – in accordance with the shareholders covenant – with a delegation from the shareholders' committee. The meetings with the shareholders' committee delegation were led by Supervisory Board member Dick van Well (who also chairs the Selection, Remuneration and Appointments Committee), assisted by the HR Director and the Administrative Affairs department. The composition of the Supervisory Board, also with regard to expertise and diversity, was emphatically considered in this recruitment process. In the person of Doede Vierstra, we believe to have found a worthy successor to Pieter Trienekens. Mr Vierstra was appointed in the Extraordinary Meeting of Shareholders on 20 September 2019, following which the Supervisory Board temporarily (until 1 February 2020) consisted of six members.

Self-assessment and education
The self-assessment of the Supervisory Board that took place at the end of 2018 with the support of an external consultant was a specific topic of discussion in 2019. The outcome of the self-assessment was discussed among the members of the Supervisory Board before the meeting of 6 February 2019. While the overall trend was positive, it was agreed to step up the focus on risk management and its follow-up as well as to tighten the focus in the company's strategy. Points requiring attention were also identified for individual Supervisory Board members, and a number of areas for improvement were designated that relate to the communication between the Supervisory Board and the Board of Management. Explanatory information on the outcome was provided to the Board of Management. Additionally, the members of the Supervisory Board and the Board of Management engaged in extensive discussions on various topics in the in-depth session at the end of June, assisted by the HR Director. The Supervisory Board would like to take this opportunity to express its appreciation for the process that was followed and the in-depth insights to which it led.

The new member of the Supervisory Board, Doede Vierstra, followed an induction programme after his appointment. In that connection, he spoke with various line managers and support department managers, and was given a tour of the Network Operations Centre (NOC). In an in-depth session, the Supervisory Board (also see above) was extensively updated on the future of the gas grid and Stedin Group's role. In addition, various Supervisory Board members individually engaged in walkabouts and/or held talks with employees in the organisation.

Independence of members of the Supervisory Board
The articles of association and the terms of reference of the Supervisory Board include provisions on the independence of Supervisory Board members.

The composition of the Supervisory Board is such that its members are able to operate independently and critically vis-à-vis one another, the Board of Management and any particular interests involved. With one exception, the members of the Supervisory Board are independent within the meaning of the Electricity Act and the Gas Act. This means that they have no direct or indirect ties with any producer, supplier or trader of electricity or gas. This does not apply to Annie Krist, who also serves as the CEO of GasTerra. Including this exception, Stedin therefore complies with the legal requirements under the Gas Act and the Electricity Act. With effect from 1 February 2020, all Supervisory Board members are independent under the provisions of the Corporate Governance Code; an exception used to be made for the chair (see the section Corporate Governance).

Ancillary positions are reported to the chair and the secretary of the Supervisory Board. None of the Supervisory Board members exceeds the maximum number of supervisory positions at large Dutch companies or major foundations.

The topic of 'ancillary positions' was discussed last year in the Supervisory Board meeting on 20 September 2019.

No material transactions occurred in 2019 that involved potential conflicts of interests between the company and Supervisory Board members.

Contacts with shareholders

The good contacts with the shareholders were continued in 2019. Four meetings of shareholders, including extraordinary meetings, were held in 2019; room was deliberately made for informal contacts in connection with those meetings. Those meetings were always well attended by the members of the Supervisory Board. In June, Stedin organised a meeting in Rozenburg on hydrogen; again, this meeting was attended both by shareholders and by a delegation of the Supervisory Board. A detailed information meeting for shareholders about the energy transition took place in December 2019. At this meeting, Stedin Group provided insight into such matters as the challenges that it needs to coordinate with a view to the energy transition and the topic 'Stedin in 2025'. This meeting was also attended by a delegation from the Supervisory Board.

The Supervisory Board welcomes the continuation of the good relationship and constructive cooperation with the shareholders in the past year, for which a sound basis had already been created in 2017 and 2018.

'Stedin in 2025' was the theme of the meeting with shareholders at Stedin's Keileweg location in Rotterdam. Alongside city councillors and civil servants with responsibility for sustainability and/or finance, we contemplated the ways in which we are currently working on the world of tomorrow.

Contacts with the Works Council

We set great store by a good relationship with the Works Council, as this helps us remainin touch with current developments and concerns within the organisation. To that end, the Supervisory Board, the Board of Management and the Works Council met twice in 2019 in what is known as the tripartite consultation. At the meeting in June, various new members of the Works Council (including its new chair) were introduced and Stedin Group's Vision for 2025 was jointly considered. The meeting in December focused on good leadership and the employee motivation survey. In addition, one meeting of the Works Council is attended by a Supervisory Board member each year. Furthermore, one of the members of the Supervisory Board also played a part in the external training programme for new members of the Works Council.

The Supervisory Board wishes to thank the employees, management, the Works Council as well as the Board of Management for their considerable involvement and commitment. Each and every day, our organisation is working on one of the most reliable grids in the world. Customer satisfaction continued to increase and the strategy of Stedin Group is increasingly taking shape, which are important indicators for the future.

Rotterdam, 23 March 2020

The Supervisory Board

Doede Vierstra (chair)
Hanne Buis
Theo Eysink
Annie Krist
Dick van Well

Remuneration report for 2019

This remuneration report describes the remuneration policy applied for the Board of Management and the Supervisory Board of Stedin Group. We also provide explanatory information on the application of the Executive Pay (Standards) Act (Wet normering topinkomens, WNT).

New remuneration policy for Board of Management

A new, updated remuneration policy for the Board of Management of Stedin Group was prepared in 2019. After approval by the Supervisory Board at the end of 2019, the policy was also approved by the General Meeting of Shareholders on 7 February 2020. The new remuneration policy entered into force on 1 January 2020.

In the new policy, the net fixed expense allowance is set at the new amount of € 160 a month agreed with the tax authorities and the terms of the expense allowance have also been amended. This policy now also states that the Remuneration section of the Dutch Corporate Governance code is voluntarily applied.

The employee benefits package of the members of the Board of Management has not changed and will continue to comprise a fixed annual salary of 12 monthly salaries increased by a holiday allowance of 8% and a package of other remuneration components consisting of participation in the ABP pension scheme, 30 days of leave annually, the option of participating in the group health insurance and disability insurance, a net expense allowance and a fully electric lease car as of 2020. No variable remuneration is included in the employee benefits.

Executive Pay (Standards) Act

The Executive Pay (Standards) Act (Wet normering topinkomens, WNT) is applicable to the business units Stedin Netbeheer B.V. and Enduris B.V. The members of the Board of Management of Stedin Group are members of the highest executive body of Stedin Netbeheer. Accordingly, the WNT applies to them as senior executives. Gerard Vesseur stepped down as CFO of Stedin Group with effect from 1 January 2019 and therefore no longer qualifies as a senior executive. In the remuneration policy, the total remuneration of the members of the Board of Management is limited to the maximum remuneration permitted pursuant to the WNT. In 2019, that maximum was € 194,000. The WNT transitional rules do not apply to any of the four members of the Board of Management of Stedin Group. For each calendar year, the Supervisory Board determines the fixed annual salary of the members of the Board of Management on the basis of their performance, the company's results, developments in society and the remaining headroom up to the WNT standard in the calendar year concerned.

The director of DNWG Groep N.V., Koen Verbogt, qualifies as senior executive of Enduris B.V. on a 50% basis pursuant to the WNT. He is director of the infrastructure company DNWG Infra on the remaining 50% basis.

The WNT also applies to the members of the Supervisory Board of Stedin Group. They qualify as senior supervisory directors. Based on the remuneration policy that took effect last year, the maximum remuneration for the chair and for the members of the Supervisory Board is 15% and 10% of the applicable WNT standard respectively.

Disclosures on remuneration

The reporting on the WNT remuneration of Stedin Group is part of the Notes to the consolidated financial statements, section 6.2 WNT compliance for 2019 by Stedin Netbeheer B.V. and Enduris B.V..

With the exception of the four members of the Board of Management and the former CFO, all employees of Stedin Group are employed by Stedin Groep Personeels B.V. rather than by Stedin Netbeheer B.V. or Enduris B.V. The obligation under the WNT to report on other executives with remuneration in excess of the individually applicable threshold amount does not apply to Stedin Groep Personeels B.V. Disclosing this information after all may constitute a breach of the privacy of the executives concerned pursuant to the General Data Protection Regulation (GDPR). The reporting therefore does not contain a complete overview of other executives employed by Stedin Group whose remuneration exceeds the WNT standard. While Stedin Group is aware that the view provided of the remuneration within the organisation is incomplete as a result, it sets store by respecting the privacy of its employees.

Since the WNT became applicable to Stedin Group, the organisation has sought to reduce both the number of cases in which and the amounts by which the WNT standard is exceeded within the group. With effect from 2019, this process resulted in a new remuneration policy at Stedin Groep Personeels B.V. for the management layer that reports directly to the Board of Management. Similar to the employee benefits package of the Board of Management, the employee benefits have been simplified and largely converted into fixed annual salary consisting of 12 monthly salaries plus a holiday allowance of 8%. The two highest salary scales have been replaced with a single new salary scale that has a lower scale maximum. The maximum of that scale in 2019 was € 155,000 per year, including a holiday allowance of 8%. Variable performance-related remuneration has been eliminated and added to the fixed salary. In 2018, a total of five non-senior executives within Stedin Group exceeded the individually applicable threshold amount. Owing to the introduction of the new remuneration policy, a double bonus payment occurred in 2019 at Stedin Groep Personeels B.V., as variable performance-related remuneration for 2018 on the one hand and as an addition to the fixed salary in 2019 on the other. This effect is non-recurring. As a result, however, the total number of cases in which the WNT standard was exceeded was 11 in 2019. After correcting for the one-off impact by disregarding the variable performance-related remuneration at Stedin Groep Personeels B.V. for 2018, the number of cases in which the standard was exceeded was in fact as high as in 2018.

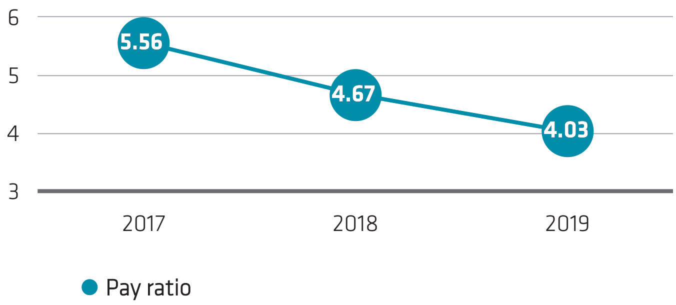
Pursuant to the WNT, Stedin has decided not to report on specific remuneration information on the grounds of Section 383(1) and Section 383c of Book 2 of the Dutch Civil Code. No rights to subscribe to or acquire shares in the capital of the company or a subsidiary have been granted to members of the Board of Management or Supervisory Board of Stedin Group. Nor have any loans, advances and guarantees been provided to the members of the Board of Management or Supervisory Board of Stedin by the company, its subsidiaries or the companies whose financial information is consolidated by Stedin.

Pay ratios

The ratio between the highest remuneration and the median remuneration decreased further in 2019 to 4.03. This ratio is almost 14% lower than in 2018, when the ratio was 4.67. The decrease resulted from the lower highest remuneration and the higher median remuneration. This ratio was determined by reference to the annual pay for pension purposes of employees working at the business units that were part of Stedin Holding N.V. as at 31 December 2019. The annual pay for pension purposes is a uniform and objective remuneration concept which includes 12 months' full-time salary, 8% holiday allowance and variable payments, such as payments for on-call shifts and emergency repair shifts, collective profit sharing, and one-off payments for service anniversary bonuses and payments at the end of the employment, among other things.

Pay ratio

2017	5.56		
2018	4.67	16%	lower compared to 2017
2019	4.03	14%	lower compared to 2018



2019 Financial Statements

Financial statements

These financial statements present the financial information of Stedin Holding N.V. for the full year 2019, with comparative figures for 2018.

References in the financial statements to Stedin Group are to Stedin Holding N.V. including its legal predecessors.

Consolidated income statement

x € 1 million	Note	2019	2018
Net revenue	4	1,220	1,270
Other income	5	14	16
Total net revenue and other income		**1,234**	**1,286**
Personnel expenses	6	405	409
Cost of sales and contracted work	7	300	327
Other operating expenses	8	220	207
Less: Capitalised own production	9	-180	-166
		745	**777**
Depreciation, amortisation and impairment of non-current assets	10	317	297
Total operating expenses		**1,062**	**1,074**
Operating profit		**172**	**212**
Financial income and expenses	11	-67	-72
Result from associates and joint ventures after income tax	13	247	-
Profit before income tax		**352**	**140**
Income tax	12	-27	-22
Profit after income tax from continuing operations		**325**	**118**
Result after income tax		**325**	**118**
Profit distribution:			
Profit after income tax attributable to holders of Stedin Holding N.V. perpetual subordinated bonds (after income tax)		12	12
Profit after income tax attributable to the shareholders of Stedin Holding N.V.		313	106
Result after income tax		**325**	**118**

Consolidated statement of comprehensive income

x € 1 million	Note	2019	2018
Result after income tax		**325**	**118**
Unrealised gains and losses that will not be reclassified to the income statement (net of tax effects)			
Effect of changes in tax rate on revaluation reserve	18.23	-12	40
Unrealised gains and losses that may be reclassified to the income statement			
Unrealised gains and losses on cash flow hedges	23	-11	-2
Recycling cash flow hedge reserve to income statement		3	4
Deferred tax liabilities on cash flow hedges / cost of hedging	18	1	-
Effect of change in tax rate on cash flow hedge reserve / cost of hedging	18	1	-3
Total other comprehensive income		**-18**	**39**
Total comprehensive income		**307**	**157**
Profit distribution:			
Holders of Stedin Holding N.V. perpetual bond loan (after income tax)		12	12
Shareholders of Stedin Holding N.V.		295	145
Total comprehensive income		**307**	**157**

Consolidated balance sheet

x € 1 million	Note	31 December 2019	31 December 2018
ASSETS			
Non-current assets			
Property , plant and equipment	14	6,753	6,406
Intangible assets	15	95	97
Right of use assets*	16	86	-
Associates and joint ventures	17	3	5
Financial assets			
- Derivative financial instruments	19	39	15
- Other non-current financial assets		13	13
Total non-current assets		**6,989**	**6,536**
Current assets			
Assets held for sale	13	-	63
Inventories	20	36	36
Current tax assets	29	20	21
Trade and other receivables	21	172	155
Derivative financial instruments	19	-	11
Cash and cash equivalents	22	72	169
Total current assets		**300**	**455**
TOTAL ASSETS		**7,289**	**6,991**
LIABILITIES			
Group equity			
Equity attributable to Stedin Holding N.V. shareholders	23	2,448	2,198
Perpetual subordinated bond loan	23	501	501
Total group equity		**2,949**	**2,699**
Non-current liabilities			
Provisions for employee benefits	24	12	13
Other provisions	25	30	22
Deferred tax liabilities	18	232	212
Derivative financial instruments	19	52	56
Interest-bearing debt	26	2,985	2,548
Deferred income	27	707	632
Other liabilities	28	1	1
Total non-current liabilities		**4,019**	**3,484**
Current liabilities			
Liabilities held for sale	13	-	7
Provisions for employee benefits	24	3	4
Other provisions	25	2	2
Interest-bearing debt	26	19	496
Trade and other liabilities	28	297	299
Total current liabilities		**321**	**808**
TOTAL LIABILITIES		**7,289**	**6,991**

* No comparative figures for 2018 owing to the adoption of IFRS 16. For further information, see note 2.4.

Consolidated cash flow statement

x € 1 million	Note	2019*	2018
Profit after income tax		**325**	**118**
Adjusted for:			
· Financial income and expenses recognised in the income statement	11	67	72
· Income tax recognised in the income statement	12	27	22
· Share in result of associates and joint ventures	13	-247	-
· Depreciation, amortisation and impairments of property, plant and equipment, intangible assets and right-of-use assets	10	317	297
· Result on sale of property, plant and equipment and intangible assets		-1	-4
· Movements in working capital	36	-14	18
· Amortisation of customer construction contributions received*	27	-19	-18
· Movements in provisions, derivative financial instruments and other*		5	-28
Cash flow from business operations		**460**	**477**
Interest paid		-71	-84
Interest received		1	10
Corporate income tax paid / received		-16	-54
Cash flow from operating activities		**374**	**349**
New loans issued		-4	-6
Repayments of loans granted		4	-
Disposal of subsidiaries	36	310	18
Investments in property, plant and equipment		-641	-599
Disposal of property, plant and equipment		1	5
Investments in intangible assets		-2	-5
Customer construction contributions received*	27	96	112
Cash flow from investing activities		**-236**	**-475**
Dividend payments		-46	-28
Payment of lease liabilities	16	-17	-
Coupon on perpetual subordinated bonds	23	-16	-16
Repayment of non-current interest-bearing debt	26	-648	-202
Repayment of current interest-bearing debt	26	-727	-905
Non-current interest-bearing debt newly issued	26	492	493
Current interest-bearing debt newly issued	26	727	880
Cash flow from financing activities		**-235**	**222**
Movements in cash and cash equivalents		**-97**	**96**
Balance of cash and cash equivalents as at 1 January		169	73
Balance of cash and cash equivalents as at 31 December		**72**	**169**

* With effect from 2019, customer construction contributions received are recognised as a separate element of cash flow from investing activities, the comparative figures for 2018 have been adjusted accordingly. This adjustment was made because of the long-term nature of the construction contributions received and for comparability with market parties.

Consolidated statement of changes in group equity

	Equity attributable to Stedin Holding N.V. shareholders											
x € 1 million	Paid up and called-up share capital	Share premium	Revaluation reserve	Translation differences reserve	Cash flow hedge reserve	Cost of hedging reserve	Retained earnings	Undistributed profit	Total	Perpetual subordinated bond loan	Non-controlling interests	Total group equity
As at 1 January 2018	**497**	**-**	**744**	**-**	**-65**	**-**	**494**	**411**	**2,081**	**501**	**-**	**2,582**
Total other comprehensive income after income tax	-	-	40	-	-	-1	-	-	**39**	-	-	**39**
Profit after income tax 2018	-	-	-	-	-	-	-	106	**106**	12	-	**118**
Total comprehensive income	**-**	**-**	**40**	**-**	**-**	**-1**	**-**	**106**	**145**	**12**	**-**	**157**
Transactions with shareholders												
Dividend payments relating to 2017	-	-	-	-	-	-	-	-28	**-28**	-	-	**-28**
Coupon on perpetual subordinated bond loan	-	-	-	-	-	-	-	-	**-**	-16	-	**-16**
Tax on coupon on perpetual subordinated bond loan	-	-	-	-	-	-	-	-	**-**	4	-	**4**
Total transactions with shareholders	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-28**	**-28**	**-12**	**-**	**-40**
Other												
Profit appropriation 2017	-	-	-	-	-	-	383	-383	**-**	-	-	**-**
Release from revaluation reserve due to depreciation of regulated networks	-	-	-30	-	-	-	30	-	**-**	-	-	**-**
Total other	**-**	**-**	**-30**	**-**	**-**	**-**	**413**	**-383**	**-**	**-**	**-**	**-**
As at 31 December 2018	497	-	754	-	-65	-1	907	106	**2,198**	501	-	**2,699**
Total other comprehensive income	-	-	-12	-	-6	-	-	-	**-18**	-	-	**-18**
Profit after income tax 2019	-	-	-	-	-	-	-	313	**313**	12	-	**325**
Total comprehensive income	**-**	**-**	**-12**	**-**	**-6**	**-**	**-**	**313**	**295**	**12**	**-**	**307**
Transactions with shareholders												
Dividend payments relating to 2018	-	-	-	-	-	-	-	-46	**-46**	-	-	**-46**
Coupon on perpetual subordinated bond loan	-	-	-	-	-	-	-	-	**-**	-16	-	**-16**
Tax on coupon on perpetual subordinated bond loan	-	-	-	-	-	-	-	-	**-**	4	-	**4**
Total transactions with shareholders	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-46**	**-46**	**-12**	**-**	**-58**
Other												
Profit appropriation 2018	-	-	-	-	-	-	60	-60	**-**	-	-	**-**
Release from revaluation reserve due to depreciation of regulated networks	-	-	-22	-	-	-	22	-	**-**	-	-	**-**
Reclassification	-	-	-	-	1	-	-	-	**1**	-	-	**1**
Total other	**-**	**-**	**-22**	**-**	**1**	**-**	**82**	**-60**	**1**	**-**	**-**	**1**
As at 31 December 2019	**497**	**-**	**720**	**-**	**-70**	**-1**	**989**	**313**	**2,448**	**501**	-	**2,949**

See note 23 Group equity for more details on group equity.

Notes to the consolidated financial statements

1. Accounting principles for financial reporting

1.1. General information

Stedin Holding N.V. (below: Stedin Group) is a public limited liability company under Dutch law with its registered office in Rotterdam, a holding company of subsidiaries, and is registered with the Chamber of Commerce under number 24306393.

Stedin Group's main activity is to ensure safe, reliable and affordable energy supply. The grid managers of Stedin Group, Stedin Netbeheer and Enduris, achieve this on the one hand by building and managing the electricity and gas networks and preparing them for the future and on the other hand by facilitating the energy market. Stedin Netbeheer operates in the provinces of South Holland and Utrecht as well as parts of the North-East Friesland and Kennemerland regions. Enduris operates in the province of Zeeland. The subsidiary DNWG Infra provides energy infrastructure services to business customers. Utility Connect is a joint operation with Alliander that focuses on data communication for smart meters.

Stedin Netbeheer and Enduris operate alongside five other Dutch regional grid managers in a regulated market. Each regional grid manager is a monopolist within its own service area. Regulation means that the work performed by the grid manager is set out in law, and that the rates are set by the Netherlands Authority for Consumers and Markets (ACM). The regulatory model encourages grid managers to perform as well as possible (in terms of efficiency and quality) by using a benchmark model.

More information on the composition of the Group is provided in note 3 Operating segments and the list 37 List of subsidiaries.

The consolidated financial statements have been prepared by the Board of Management of Stedin Group. The 2019 financial statements have been signed by both the Board of Management and the Supervisory Board of the company in the meeting of 23 March 2020, and will be presented for adoption to the General Meeting of Shareholders on 13 May 2020.

Unless otherwise stated, all amounts in this annual report are in millions of euros.

1.2. Key events in 2019

Strategy

In 2019, Stedin Group further implemented its strategy as revised in 2018, under which the Group focuses more on grid management as a core activity and accordingly decided to proceed to a phased disposal of all commercial activities.

Sale of Joulz Diensten

On 12 March 2019, Stedin Group and 3i Infrastructure signed a purchase agreement in the amount of € 310 million for the acquisition of Joulz Infradiensten B.V. (Joulz Infra) and Joulz Meetbedrijf B.V. (Joulz Meet). The shares were transferred on 30 April 2019. On 1 January 2019, prior to the sale, Stedin Groep Personeels B.V. legally split off the employees working for the benefit of the activities of the respective companies into Joulz Infradiensten B.V.

On 30 April 2019, the assets and liabilities held for sale were sold for € 310 million. The result from this transaction was € 251 million, which is accounted for under 'Share in result after income tax of associates' and the incoming cash flow under investment activities.

Incorporation of NetVerder B.V

As from 1 May 2019, this name covers the activities of the grid operator focused on energy infrastructures, other than natural gas and electricity. The law stipulates that grid management for gas and electricity must not be carried out by the same company that also manages the other energy infrastructure. These activities have consequently been transferred now to an independent brand within Stedin Group, NetVerder. They were formerly carried out under the banner of the Joulz brand. A new name was required due to the sale of the commercial (Joulz) activities.

Changes in corporate income tax rate

In December 2019, the Upper House of Dutch Parliament approved the bill to change the corporate income tax rate to 25% in 2020 and to 21.7% in 2021. This means that the deferred tax assets and liabilities will be settled with the tax authorities at higher rates in the future than anticipated in 2018 (22.55% for 2020 and 20.5% from 2021). The measurement of the deferred tax assets and liabilities as at 31 December 2019 reflects those higher rates. The negative effects on group equity and net profit are € -11 million and € -2 million respectively, and are explained in detail in note 18 Deferred tax assets and liabilities.

1.3. International Financial Reporting Standards (IFRS)

The consolidated financial statements of Stedin Group have been prepared in conformity with IFRS as applicable at 31 December 2019 and as adopted by the European Union (EU), and the definitions of Part 9, Book 2 of the Dutch Civil Code. IFRS comprises both the IFRS standards and the International Accounting Standards issued by the International Accounting Standards Board (IASB) as well as the interpretations of IFRS and IAS standards by the IFRS Interpretations Committee (IFRIC) as well as the Standing Interpretations Committee (SIC) respectively. Where necessary, the accounting policies of joint operations and associates have been aligned with those of Stedin Holding N.V. The consolidated financial statements have been prepared using the going concern and accruals concepts.

Amended IFRS standards and interpretations

The following amendments to IFRS standards that have been adopted by the European Commission with effect from the financial year 2019 are relevant to Stedin Group and have been applied where appropriate when preparing this annual report:

IFRS 16 Leases

IFRS 16 Leases changes the accounting for and presentation of leases in the financial statements. Stedin Group implemented the new standard with effect from 1 January 2019, opting to apply the modified retrospective approach. As a result, the comparative figures have not been restated.

The basis of measurement for the leases is stated in 2.2.11 Leases, while the effects of the adoption and application of IFRS 16 are included in note 2.4 Effects of the adoption of new IFRS Standards.

IFRIC 23 Uncertainty over Income Tax Treatments

The new interpretation of IFRIC 23 relates to uncertainty over income tax treatments under IAS 12. The following matters are addressed in this interpretation:

- collective tax treatments;
- assumptions for taxation authorities' examinations;
- determination of taxable profit (tax loss), tax bases, unused tax losses, and tax rates;
- effects of changes in facts and circumstances.

This interpretation became effective as from 1 January 2019. It has no immediate consequences for Stedin Group's financial statements.

While Stedin Group does not have a compliance agreement with the tax authorities, there is frequent consultation with the inspector, including consultation on uncertain positions. Stedin Group applies a policy of taking positions that are not designated as ‘aggressive’ in terms of the taxability of profits, deductibility of costs or later timing of taxation.

As soon as insights change following consultation with the inspector or Stedin and positions become less uncertain, it will result in recognition in the current tax position or reassessment of risks. The uncertain tax position is disclosed in the financial statements when a cumulative material uncertain impact can be expected to arise from it, i.e. before it is accounted for in the current tax position.

As there are no uncertain tax positions that may lead to a material uncertain impact, no additional disclosures are included in the financial statements.

New IFRS standards and interpretations relating to subsequent financial years

The following new IFRS standards are relevant to Stedin Group and have been adopted by the European Commission but are not mandatory for 2019. They will be applied from 1 January 2020:

Revised Conceptual Framework

The IASB has revised the Conceptual Framework. While the IASB also updated references in standards (which therefore now refer to the new Framework), it has not implemented consistent changes in standards to reflect the changes in the framework, such as the change in the definitions of assets and liabilities in the standards.

The new framework:

- reintroduces the terms 'stewardship' and 'prudence';
- introduces a new definition of an asset that focuses on rights and a new definition of a liability which is probably broader than the definition that it replaces, but which does not change the distinction between a liability and an equity instrument;
- removes references to expected flows of economic benefits from the definitions of assets and liabilities, which reduces the obstructions to identifying the existence of an asset or liability and places greater emphasis on reflecting measurement uncertainty;
- discusses measurement at historical cost and fair value, and provides some guidance on how the IASB would choose a measurement basis for a specific asset or liability;
- states that profit or loss is the primary performance indicator, and that the IASB will only use other comprehensive income in exceptional circumstances and only for income or expenses which arise from a change in the current value of an asset or liability;
- discusses uncertainty, derecognition, unit of account, reporting entity and combined financial statements.

Stedin Group will examine the potential consequences for the financial statements but does not expect the revision of the Conceptual Framework to have a significant impact on the financial statements.

Definition of material – amendments in IAS 1 and IAS 8

The IASB implemented the amendments in the definition of materiality in response to the concerns experienced by entities in making materiality judgements when preparing financial statements. The following amendments were introduced:

- The IASB introduced the amendments in IAS 1 and IAS 8 with the intention of making the definition of 'material' in IAS 1 easier to understand rather than altering the underlying concept of materiality in the IFRS standards.
- The concept of ‘obscuring’ material information with immaterial information has been included as part of the new definition.
- The threshold for materiality influencing users has been changed from ‘could influence’ to ‘could reasonably be expected to influence’.
- The definition of 'material' in IAS 8 has been replaced by a reference to the definition of 'material' in IAS 1. In addition, the IASB amended other standards and the Conceptual Framework, which contain a definition of 'material' or refer to the term ‘material’ in order to ensure consistency.

As it is not required to apply this amendment retrospectively, it has no impact on the financial statements of Stedin Group.

Interest Rate Benchmark Reform – amendments

The IASB published the 'Interest Rate Benchmark Reform (Amendments to IFRS 9, IAS 39 and IFRS 7)' as an initial response to the potential consequences of the IBOR reform for financial reporting.

Interbank offered rates (IBORs) are interest rate benchmarks such as LIBOR, EURIBOR and TIBOR, which represent the costs of obtaining unsecured loans in a specific combination of currencies and maturities as well as in a specific interbank loan market. Recent market developments have called into question the long-term viability of those benchmarks.

The published amendments relate to issues that affect financial reporting in the period prior to the replacement of an existing interest rate benchmark with an alternative interest rate as well as the implications for specific hedge accounting requirements in IFRS 9 Financial Instruments and IAS 39 Financial instruments: recognition and measurement, for which prospective analysis is required. Both IAS 39 and IFRS 9 are amended because entities have an accounting policy choice upon the initial application of IFRS 9 regarding whether to continue applying hedge accounting in accordance with the requirements of IAS 39. There are also amendments to IFRS 7 Financial instruments: measures relating to additional disclosures concerning uncertainties arising from the Interest Rate Benchmark Reform.

The amendments in the Interest Rate Benchmark Reform (Amendments to IFRS 9, IAS 39 and IFRS 7):

- modify specific hedge accounting requirements so entities will apply those hedge accounting requirements, assuming that the interest rate benchmark on which the hedged cash flows and cash flows of the hedging instrument are based is not altered as a result of the Interest Rate Benchmark Reform;
- are mandatory for all hedging relationships that are directly affected by Interest Rate Benchmark Reform;
- are not intended to provide relief for other consequences of Interest Rate Benchmark Reform (if a hedging relationship no longer meets the requirements for hedge accounting due to reasons other than those specified in the amendments, the discontinuation of hedge accounting is required);
- require specific disclosures on the extent to which the hedging relationships of the entities are affected by these amendments.

The amendments are effective for annual periods beginning on or after 1 January 2020, with early implementation being permitted. Stedin Group has applied these amendments with effect from 1 January 2019, which do not have consequences for the financial statements because there have been no changes to the market interest rate used for hedge accounting.

2. Accounting policies

2.1. Basis of consolidation

The consolidated financial statements incorporate the financial statements of Stedin Holding N.V., its subsidiaries and the relevant proportion of the joint operations, non-consolidated joint ventures, associates as well as other capital interests.

An overview of the entities included in the consolidation is provided in note 37 List of subsidiaries in the notes to these financial statements.

Subsidiaries

These financial statements comprise the financial reporting of Stedin Group and its subsidiaries. A subsidiary is an entity over which Stedin Group has control. This means that the company controls, directly or indirectly, this entity's financial and business operations so as to obtain economic benefits from its activities. Control is based on the existing and potential voting rights that can be exercised or converted, and additionally on the existence of other agreements that enable Stedin Group to determine operational and financial policy.

Pursuant to the full consolidation method, 100% of the assets, liabilities, income and expenses of subsidiaries are recognised in the consolidated financial statements. The results of subsidiaries acquired during the financial year are included from the date on which control was obtained. Subsidiaries are derecognised from the date on which control ceases to exist. Intercompany balances, transactions and results on such transactions between subsidiaries are eliminated. Unrealised losses are likewise eliminated, unless the transaction concerned provides cause for recognising an impairment loss. The accounting policies of subsidiaries have if necessary been adapted to ensure a consistent application of accounting policies within Stedin Group. Losses on associates are recognised up to the amount of the net investment in the associate, including the book value as well as any expected credit losses on loans and guarantees granted to the associate.

Non-controlling interests consist of the capital interests of minority shareholders and are measured on the basis of the fair value of the identifiable assets as well as liabilities when a subsidiary is acquired and the non-controlling interest in subsequent changes to the equity. Non-controlling interests in the equity and results of subsidiaries are disclosed separately.

Joint arrangements

Joint operations and joint ventures are entities for alliances in respect of which there are contractual undertakings with one or more parties under which they have joint decisive control over that entity. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets and are accountable for the liabilities relating to the arrangement. A joint venture is a joint arrangement whereby the parties that have joint control over the arrangement have rights to the net assets of the arrangement.

Only the share of Stedin Group in the assets, liabilities, income and expenses of joint operations is consolidated on the basis of Stedin Group's accounting policies. Joint ventures are recognised using the equity method in accordance with the accounting policies of Stedin Group. Interests in joint operations and joint ventures are recognised from the date on which joint control is obtained until that joint control no longer exists.

Associates

An associate is an entity over whose financial and operational policies Stedin Group exercises significant influence, but no decisive control. In general, 20% to 50% of the voting rights are held in an associate.

The share in associates is recognised in the consolidated financial statements using the equity accounting method, in which initial recognition is at historical cost with the carrying amount being adjusted for the share in the result. Dividends received are deducted from the book value. Associates are recognised from the date on which significant influence is obtained until the date on which that influence no longer exists. Results on transactions with associates are eliminated in proportion to the equity interest in the associate.

Losses on associates are recognised up to the amount of the net investment in the associate, including the book value as well as any expected credit losses on loans and guarantees granted to the associate.

2.2. Accounting policies

2.2.1. General

The main accounting policies used in preparing the 2019 financial statements of Stedin Group are summarised below. The accounting policies used in these financial statements are consistent with the accounting policies applied in the 2018 financial statements, except for the effect of newly applied and amended standards as set out in note 1.3 International Financial Reporting Standards (IFRS).

2.2.2. Impairments of assets

Impairment is present when the book value of an asset is higher than the recoverable amount. The recoverable amount of an asset is the higher of the sale price less costs to sell and the value in use. An asset's value in use is based on the present value of estimated future cash flows calculated using a pre-tax discount rate which reflects the time value of money and the specific risks of the asset. The recoverable amount of an asset which does not independently generate a cash flow and which is dependent on the cash flows of other assets or groups of assets is determined for the cash-generating unit of which the asset is part.

A cash-generating unit is the smallest identifiable group of assets separately generating cash flows that are significantly independent of the cash flows from other assets or groups of assets. Cash-generating units are distinguished on the basis of the economic interrelationship between assets and the generation of external cash flows rather than on the basis of separate legal entities.

Goodwill is allocated on initial recognition to one or more cash-generating units in line with the way in which the goodwill is assessed internally by the management. Impairment tests are performed each year to assess the value of goodwill based on expected future cash flows.

An assessment is carried out annually for assets other than goodwill to assess whether events or changes indicate impairment. If there is evidence of impairment, the recoverable amount of the relevant asset or cash-generating unit is determined.

When the book value of assets allocated to a cash-generating unit is higher than the recoverable amount, the book value is reduced to the recoverable amount. This impairment is recognised in profit or loss. Impairment of a cash-generating unit is first deducted from the goodwill attributed to that unit (or group of units) and then deducted proportionately from the book value of the other assets of that unit (or group of units).

Impairment previously recognised may be reversed through the income statement if the reasons for it no longer exist or have changed. Impairment is only reversed up to the original book value less regular depreciation. Impairment losses on goodwill are not reversed.

2.2.3. Foreign currencies

The financial statement items of Stedin are administrated in the currency of the economic environment in which Stedin Group operates. The euro (€) is Stedin Group's functional currency and the currency in which the financial statements are presented.

Transactions in foreign currencies are translated into the functional currency (€) at the exchange rate prevailing on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies on the reporting date are translated into euros at the exchange rate prevailing on the reporting date. Foreign currency exchange differences that arise on foreign currency transactions or translation of balance sheet items are recognised in the income statement, except if these foreign currency risks are hedged by derivative financial instruments for which hedge accounting is applied.

2.2.4. Netting off

Receivables and payables with a counterparty are netted if there is a contractual right and the intention to settle these simultaneously. In the absence of an intention or actual netted settlement, the existence of an asset or liability is determined for each contract.

2.2.5. Segment information

Business segments are based on Stedin Group's internal organisation and management reporting structure. The results of business segments are reviewed regularly by the Board of Management to make decisions about resources to be allocated to a segment and assess its financial performance.

Transfer prices for internal revenues and costs are at arm's length terms. The accounting policies of Stedin Group are also applied in segment reporting. The results of individual segments do not include financial income and expense, the share of profit of associates and joint ventures or the tax charge.

2.2.6. Net revenues and other income

Net revenue

Stedin Group recognises revenue when it satisfies the performance obligation by transferring goods or services to the customer. The time of transfer is:

- over a period; or
- at a moment in time.

It is inherent in the services of Stedin Group that these are transferred to the customer during the period in which they are provided. The services of the Group can be subdivided into regulated services and non-regulated services.

Revenue from regulated services

The rates for the regulated services of Stedin Group are subject to the regulation framework of the Dutch regulator for the provision of energy services: the Netherlands Authority for Consumers and Markets (ACM). With regard to the non-regulated services, Stedin Group is not subject to a regulator for the pricing of the services.

Energy distribution services

Energy distribution services comprise distribution, connection and metering services for electricity as well as distribution, connection and metering services for gas. Stedin Group distributes electricity and gas via its grids to the customer's connection. The distribution services are recognised during the supply period. The revenue from distribution services consists of a fixed periodic payment for the use and the availability of the grids as well as a payment per distributed volume. These services relate to performance obligations that are satisfied during a period. The revenues for the use and the availability of the grids are allocated to the supply period in equal amounts. Allocation in equal amounts represents the availability of the grid during the entire year under review. The volume-based payments are recognised in the income statement in the period in which the distribution service was provided.

Customer construction contributions received and reconstructions

In order to make distribution services for electricity and gas possible, Stedin Group will construct grid connections for new supply points. The customer pays a contribution towards the construction costs for such a new connection. The connection is inseparably linked to the distribution services and forms an integral part of the payment for distribution services. Revenue from customer construction contributions is therefore recognised in equal amounts over the expected useful life of the connection point concerned. Stedin Group also receives contributions for reconstruction work carried out on the grid. Like the customer construction contributions, these are recognised in equal amounts over the expected useful life of the grid. The customer construction and reconstruction contributions received in advance are contract liabilities which are recognised in the balance sheet under 'Deferred income'.

Selling prices

The selling prices of regulated services are based on the rates as determined by the ACM for the distribution of energy. The rates for customer construction contributions have also been determined by the ACM. Adjustments in the selling prices of regulated services can arise mainly as a consequence of failures in the grid for which customers are required to be compensated by law and are recognised as variable revenue. These adjustments are based on statutory rates. The related revenues classify as variable revenues. Variable revenue is recognised only to the extent that it is highly probable that this revenue will not be reversed.

Revenue from non-regulated services

The non-regulated services of Stedin Group comprise the data processing of energy meters; the management, maintenance and rental services of energy meters; failure, management, maintenance and rental services for transformers; and services in the field of high-voltage projects. Stedin Group applies the portfolio approach for these activities, under which revenue is recognised for the progress of the delivered performance. Revenue from other services is mainly allocated on the basis of the percentage of completion of the project based on the accumulated costs of the project on the balance sheet date compared with the total expected project costs. Selling prices for non-regulated services are in line with the market as laid down in the relevant agreement between Stedin Group and the customer.

In addition, Stedin Group leases a number of business premises and transformers to third parties. The assets are recognised by Stedin Group in property, plant and equipment. Lease revenues are recognised in equal amounts through the income statement of Stedin Group as revenues over the term of the lease.

Contract assets and liabilities

Contract assets relate to the non-enforceable claims under and expenditure for contracts with customers. For Stedin Group, these are the amounts not yet invoiced. Stedin Group presents contract assets under ‘Trade and other receivables’. A bad debt provision is recognised for the balance sheet item 'amounts not yet invoiced' in the same way as for the Trade receivables. Contract liabilities are presented as ‘Deferred income’ and as part of ‘Trade and other liabilities’.

Other income

Items recognised under other income include the following: services to third parties, sales proceeds from discontinued operations and government grants.

2.2.7. Cost of sales and contracted work

The purchase costs for compensation of technical and administrative network losses are recognised in the period in which the revenues from the sale are realised. The costs of materials and services from third parties are also included in this line item.

2.2.8. Financial income and expenses

Financial income comprises interest income from the financial assets, including loans issued, cash loans, and cash and cash equivalents. This interest income is calculated on the basis of the effective interest method.
Financial expenses consist mainly of interest expense on interest-bearing liabilities, calculated on the basis of the effective interest method. The interest-bearing liabilities consist of borrowings and debt, except the perpetual subordinated bond loan. The interest expense for the perpetual subordinated bond loan is not included in this item. It is accounted for directly in group equity. In addition, financial expenses also include the other financing costs.

Gains and losses on financial hedging instruments are, insofar as these are taken through the income statement, also accounted for under financial income and expenses. Dividend income from other capital interests is recognised when it falls due.

2.2.9. Income taxes

Income taxes comprise current taxes and movements in deferred taxes. These amounts are recognised in profit or loss unless they concern items that are recognised directly through group equity. Current tax is the amount of income taxes payable or recoverable in respect of the taxable profit or loss for the year under review, and is calculated on the basis of applicable tax legislation and rates.

Income taxes comprise all taxes based on taxable profits and losses, including taxes payable by subsidiaries and associates on distributions to Stedin Holding N.V. Additional income taxes on the result before dividend distributions are recognised at the same time as the obligation to distribute that dividend is recognised.

2.2.10. Property, plant and equipment

Property, plant and equipment is subclassified into the following categories:

- Land and buildings
- Machinery and equipment
- Regulated networks
- Other operating assets
- Assets under construction

Networks and network-related assets

Stedin Group's networks and network-related assets in the regulated domain are measured at the revalued amounts. The revalued amount is the fair value at the date of the revaluation less accumulated depreciation and impairment.

The fair value of these network assets is measured at the beginning of each new regulatory period. If there are indications in the interim period that the fair value differs significantly from the book value, the revaluation will be adjusted. An increase in the book value as a result of a revaluation of networks and network-related assets in the regulated domain is recognised directly in group equity through the revaluation reserve. A reduction in the book value is first recognised directly in group equity through the revaluation reserve insofar as the amount of the revaluation reserve is sufficient. If the decrease exceeds the revaluation reserve, the excess is recognised through the consolidated income statement.

The difference between the depreciation based on the revalued book value and depreciation based on the original historical cost, less deferred tax, is transferred periodically from the revaluation reserve to retained earnings.

See note 2.2.26 Fair value for a detailed description of fair value.

Land and buildings, machinery and equipment, other operating assets and assets under construction

Other property, plant and equipment is recognised at cost less accumulated depreciation and impairment. Cost comprises the initial acquisition price plus all directly attributable costs. Cost of assets constructed by the company comprises the cost of materials and services, direct labour and an appropriate proportion of directly attributable overhead costs.

Financing costs

Financing costs directly attributable to the purchase, construction or production of an eligible asset are recognised in cost in accordance with IAS 23. If an asset comprises multiple components with differing useful lives, these components are recognised separately.

Subsequent expenditure

Expenses incurred at a later date are only added to the book value of an asset if and to the extent that the condition of the asset is improved compared to the originally formulated performance standards. Overhaul, repair and maintenance are recognised as an expense in the period in which the costs are incurred. If an asset comprises multiple components with differing useful lives, these components are recognised separately. Costs incurred to replace components of property, plant and equipment that are replaced for the asset to be capable of operating in the intended manner are capitalised while simultaneously removing the carrying amount of the replaced components.

Depreciation and amortisation

Depreciation is recognised in the consolidated income statement using the straight-line method based on estimated useful life, taking into account the estimated residual value. Useful lives and residual values are reassessed annually, and any changes are recognised prospectively. Land, sites and assets under construction are not depreciated.

Category	Useful life in years
Buildings	25 - 50
Machinery and equipment	10 - 50
Regulated networks	10 - 50
Other operating assets	3 - 25

2.2.11. Leases

Stedin Group has implemented IFRS 16 with effect from 1 January 2019. As a result, the leases (with Stedin as lessee) have been capitalised in the balance sheet under 'right-of-use assets'. The corresponding lease liability is recognised in the balance sheet under 'interest-bearing debt'. This situation led to an increase in the balance sheet of € 103 million. In addition, a shift occurred in the income statement from operational expenses to depreciation and amortisation, and to a very limited extent to financial expenses. In the cash flow statement, this shift led to a decrease in cash flow from operating activities, with a simultaneous increase in outgoing cash flow from financing activities by the same amount. For the impact analysis of the adoption of IFRS 16, see 2.4 Effects of the adoption of new IFRS Standards.

Stedin Group as lessee

The provisions of IFRS 16.9 were taken into account by Stedin Group in assessing whether a contract is, or contains, a lease. Upon commencement of a contract, Stedin Group assesses whether it is a lease or includes a lease component. A contract is or includes a lease if the contract grants the right to exercise control over the use of an identified asset during a certain period, in return for compensation. The incremental borrowing rate is based on the risk-free market interest rate, increased by a risk premium applying specifically to Stedin Group for a similar term and with a similar security as that which Stedin Group would have to pay in order to borrow the funds necessary to obtain a similar asset. With respect to each lease in which Stedin Group is the lessee, Stedin Group calculates a right-of-use asset and a corresponding lease liability, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases with a value of € 5,000 or less. Stedin Group recognises the lease payments for these leases on a straight-line basis as operational expenses in the income statement.

The lease liability is initially measured at the present value of the future lease payments, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the lessee uses the incremental borrowing rate.

Lease payments that are included in the measurement of the lease liability comprise:

- fixed lease payments, less any rent reductions and/or investment contributions;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options;
- payments of penalties for terminating the lease, if it is reasonably certain that the lessee will exercise the option to terminate the lease.

The lease liability is then increased monthly to reflect the interest payable on the lease liability and is decreased to reflect the lease payments.

Stedin Group remeasures the lease liability and the right-of-use assets whenever:

- the lease term has changed, or the expectation of the exercise of an extension option, termination option or purchase option has changed;
- the lease payments change due to indexation, for instance;
- a lease contract is modified.

The right-of-use asset is stated at cost on the commencement date. This cost price consists of the amount of the initial statement of the lease liability, the initial direct costs incurred and the lease payments made on or before the commencement date, minus all the lease incentives received and the initial direct costs incurred.

Stedin Group determines the lease period as the non-cancellable period of a lease, together with:

- the periods included in an option to extend the lease if it is reasonably certain that Stedin Group will exercise this option;
- the periods included in an option to terminate the lease if it is reasonably certain that Stedin Group will not exercise this option.

In this assessment, Stedin Group takes into account all relevant facts and circumstances that are an economic motive to exercise the option to extend the lease, or exercise the option to terminate the lease.

Variable leases that do not depend on an index or rate are not included in the measurement of the lease liability and the right-of-use asset. The related payments are recognised as an expense in profit or loss.

As a practical expedient, IFRS 16 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. Stedin Group does not apply this simplification.

Right-of-use assets are periodically tested for impairment in accordance with IAS 36.

The right-of-use and the lease obligation must be assessed together with regard to the recognition of deferred taxes as a single transaction. So there is no temporary difference at first recognition. The deffered tax is calculated over the temporary differences that subsequently arise when the right of use is written off and the lease obligation is reduced.

Also see note 2.4 Effects of the adoption of new IFRS Standards under IFRS 16 Leases for the impact analysis for this standard with effect from 1 January 2019.

Stedin as lessor
Stedin Group leases a number of business premises and transformers to third parties. The assets are recognised by Stedin Group in property, plant and equipment. Lease revenues are recognised in equal amounts through the income statement of Stedin Group as revenues over the term of the lease.

Depreciation and amortisation
Depreciation is recognised in the consolidated income statement using the straight-line method based on the estimated lease term of the right-of-use asset. The lease term is assessed when the lease contracts are changed and the lease term can be terminated or renewed, based on the lease contract.

The following useful lives are applied:

Category	Useful life in years
Leasehold and buildings	1-100
Leased cars	1-6

2.2.12. Goodwill

The acquisition price of a subsidiary, joint venture or associate is equal to the amount paid to purchase the interest. If the acquisition price is higher than the share in the fair value at the date of acquisition of the identifiable assets, liabilities and contingent liabilities, the excess is recognised as goodwill. Any shortfall is recognised as a gain in profit or loss.

Goodwill is measured at cost less impairment. Goodwill is allocated to one or more cash-generating units. Allocated goodwill is tested for impairment annually. This test is not performed as long as goodwill has not been allocated.

Goodwill purchased on acquisition of subsidiaries and joint operations is recognised in the balance sheet under intangible assets. Goodwill paid to acquire an interest in a joint venture or associate is included in the cost of acquisition.

For further details, see note 15 Intangible assets.

2.2.13. Other intangible assets

Other intangible assets comprise customer databases acquired with acquisitions, software and licences, concessions, permits, rights and development costs. The related costs are capitalised if it is probable that these assets will generate economic benefits and their costs can be reliably measured. Other intangible assets have a finite useful life, and are recognised at cost less accumulated amortisation and impairment.

Software

Software is capitalised at cost. Cost of standard and customised software comprises the one-time costs of licences. Costs of software maintenance are recognised as an expense in the period in which they are incurred.

Depreciation and amortisation

Amortisation is recognised as an expense on the basis of the estimated useful life from the time that the relevant asset is available for use. Other intangible assets are amortised using the straight-line method. The residual value of these assets is nil. Amortisation is presented in the income statement as a component of 'Depreciation, amortisation and impairments of non-current assets'.

The following useful lives are applied:

Category	Useful life in years
Licences	3 - 30
Software	3 - 5
Concessions, permits and rights	3 - 30
Development costs	5 - 15

2.2.14. Deferred taxes

Deferred taxes are calculated using the balance sheet method for the relevant differences between the book value and tax base of assets and liabilities. Deferred taxes are measured using the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on applicable tax rates and tax laws. Deferred taxes are recognised at face value.

Deferred tax assets are recognised for deductible temporary differences, tax losses carried forward and unused tax credits available for set-off if and to the extent that it is probable that future taxable profit will be available against which unused tax losses and unused tax credits can be utilised.

Deferred tax assets for all deductible temporary differences relating to investments in subsidiaries, joint operations, and interests in associates as well as joint ventures are only recognised if it is probable that the temporary difference will reverse in the near future and that future taxable profit will be available against which the deductible temporary difference can be utilised.

Deferred tax liabilities are recognised for all taxable temporary differences arising from investments in subsidiaries, joint operations, and interests in associates and joint ventures, unless Stedin Group can determine the time at which the temporary difference will reverse and it is probable that the temporary difference will not reverse in the near future.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to set off tax assets against tax liabilities, and where the deferred tax assets and liabilities relate to taxes levied by the same tax authority on the same fiscal unity.

2.2.15. Derivative financial instruments

Hedge accounting

Derivative financial instruments are classified as hedging instruments if they are used to hedge the risk of fluctuations in current or future cash flows, which could affect the result, or fluctuations in the fair value of assets or liabilities. If the hedge can be attributed to a particular risk or to the full movement in the transaction associated with an asset, liability or highly probable forecast transaction or balance sheet item, the attributed derivative financial instruments are recognised as hedging instruments.

The positive book values of the derivative financial instruments are recognised under the derivative financial instruments in non-current and current assets in the consolidated balance sheet. The negative book values of the derivative financial instruments are recognised in the non-current and current liabilities in the consolidated balance sheet.

Cash flow hedge accounting

Cash flow hedge accounting is intended to mitigate movements in future cash flows. If the conditions for cash flow hedge accounting are met, the effective portion of the changes to the fair value of the derivative financial instruments concerned is recognised in the consolidated statement of comprehensive income as 'Unrealised gains and losses on cash flow hedges'. These changes (after income tax) are then recognised in the cash flow hedge reserve in group equity or in the reserve for cost of hedging.

Amounts recognised through group equity are transferred to the consolidated income statement when the hedged asset or liability is settled. When a hedging instrument expires, is sold, terminated or exercised, or when the conditions for hedge accounting are no longer met although the underlying future transaction has yet to take place, the accumulated result remains in group equity (in the cash flow hedge reserve) until the forecast transaction has taken place. If the forecast transaction is no longer likely to take place, the accumulated result is transferred directly from group equity to the consolidated income statement.

Fair value hedge accounting

Fair value hedge accounting is applied to mitigate the risk of changes in the fair value of the hedged positions. If the conditions for fair value hedge accounting are met, the change in the fair value of the hedged positions and the change in fair value of the derivative financial instruments are recognised in the consolidated income statement. The ineffective portion is hereby recognised directly through the consolidated income statement.

2.2.16. Other non-current financial assets

Other financial assets are mainly long-term items with a term of more than one year, such as loans, receivables and prepayments to associates, joint ventures or third parties. Long-term receivables, loans and prepayments are measured at amortised cost using the effective interest method.

2.2.17. Assets/liabilities held for sale

Assets/liabilities held for sale and discontinued operations are classified as held for sale when the book value will be recovered through a sale transaction rather than through continuing use. This classification is only made if it is highly probable that the assets/liabilities or operations are available for immediate sale in their present condition and the sale is expected to be completed within one year.

Assets/liabilities held for sale are measured at the lower of the book value preceding classification as held for sale and fair value less costs to sell.

2.2.18. Inventories

Inventories are recognised at the lower of weighted average cost and direct net realisable value. Cost of inventories is the purchase price including directly attributable costs incurred to bring the inventories to their present location and condition. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs to sell. Impairment of inventories is recognised through the consolidated income statement if the book value exceeds the net realisable value.

2.2.19. Trade and other receivables

Trade and other receivables have a term of less than one year. These receivables also include the net amounts at the reporting date that have yet to be billed for services supplied. On initial recognition, receivables are accounted for at amortised cost less impairment losses due to expected losses for bad debts in connection with credit risk.

The expected credit losses are estimated on the basis of the credit quality of the counterparty on the basis of individual estimates or estimates for a portfolio of similar receivables. For the assessment of risks in portfolios, Stedin Group uses a simplified model that is based on Stedin's experience of receivables with the same risk profile, supplemented by expected developments of the debtors and the economic environment.
Receivables are written off when it is clear that the debtor will no longer be able to pay.

2.2.20. Cash and cash equivalents

Cash and cash equivalents comprise cash and bank balances as well as deposits with a maturity of no more than three months.

2.2.21. Perpetual subordinated bond loan

The perpetual subordinated bond loan is classified under group equity in the consolidated financial statements, in agreement with the contractual conditions for the bond loan.

The principal of the perpetual subordinated bond loan is presented at face value. Both the discount and transaction costs relating to the issue of the bond loan were charged directly to the general reserve when the loan was issued. The coupon interest payable annually and the associated tax effects are recognised in the valuation of the loan.

The company financial statements likewise apply IFRS for the presentation of this bond loan.

2.2.22. Provisions for employee benefits

Pensions

The pension liabilities of almost all business units have been placed with the industry-wide pension funds: Stichting Pensioenfonds ABP (ABP) and Stichting Pensioenfonds Metaal en Techniek (PMT). A limited number of employees have individual plans insured with various insurance companies.

The amount of the pension depends on age, salary and years of service. Employees may opt to retire earlier or later than the state retirement age, in which case their pension is adjusted accordingly. Retiring later than the state retirement age is only possible with Stedin's consent. At ABP, employees can retire between 60 and the state retirement age plus five years. At PMT, this is between five years before and five years after the state retirement age.

The most important pension plans, which have been placed with ABP, are group plans in which several employers participate. These plans are essentially defined benefit plans. However, as Stedin has no access to the required information and because participation in the group plans exposes Stedin to actuarial risks connected with present and former employees of other entities, these plans are treated as defined contribution plans and the pension contributions payable for the financial year are accounted for as pension expenses in the financial statements.

Other provisions for employee benefits

A provision is recognised for the obligation of Stedin Group to pay out amounts related to long-service benefits and on the retirement of employees. A provision is also recognised for the obligation of Stedin Group to contribute towards the health insurance premiums of retired employees, salary payments in the event of illness and the employer's risk under the Unemployment Act. Where appropriate, these liabilities are calculated at the reporting date using the projected unit credit method, using a pre-tax discount rate which reflects the current market assessment of the time value of money.

2.2.23. Other provisions

A provision is recognised when there is a present legal or constructive obligation that is of an uncertain amount or timing due to a past event, the settlement of which will probably lead to an outflow of resources.

Provisions which will be settled within one year of the reporting date, or which are of limited material significance, are recognised at face value. Other provisions are recognised at the present value of the expected expenditure. The specific risks inherent to the relevant obligation are taken into account when determining this expenditure. The present value is calculated using a pre-tax discount rate which reflects the current market assessment of the time value of money. The expected expenditure is determined based on detailed plans in order to limit the uncertainty regarding the amount.

2.2.24. Interest-bearing debt

On initial recognition, interest-bearing debt is carried at fair value less directly attributable transaction costs. Subsequent to initial recognition, interest-bearing debt is recognised at amortised cost using the effective interest method.

2.2.25. Trade and other liabilities

Trade payables and other financial liabilities are recognised at fair value. They are subsequently carried at amortised cost. Liabilities with a term of less than one year are not discounted on initial recognition. In view of their short-term nature, trade and other liabilities are recognised at face value.

2.2.26. Fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value can be measured in various ways and, depending on the use of observable inputs, the value is classified into the following categories:

Level 1

Level 1 recognises financial instruments whose fair value is measured using unadjusted quoted prices in active markets for identical instruments.

Level 2

Level 2 recognises financial instruments whose fair value is measured using market prices or pricing statements and other available information. Where possible, the measurement method uses observable market prices. Contracts for derivative financial instruments are measured by agreement with the counterparty, using observable interest rate and foreign currency forward curves.

Level 3

Level 3 recognises financial instruments whose fair value is measured using calculations involving one or more significant inputs that are not based on observable market data.

2.3. Judgements, estimates and assumptions

In preparing these financial statements, the management of Stedin Group used judgements, estimates and assumptions which affect the reported amounts and rights and obligations not disclosed in the balance sheet. In particular, they relate to the revenues from supplies to retail customers; the useful life of property, plant and equipment; the fair value of the relevant assets and liabilities; impairment of assets and the amount of provisions. The judgements, estimates and assumptions that have been made are based on market information, knowledge, historical experience as well as other factors that can be deemed reasonable in the circumstances. Actual results could, however, differ from the estimates. Judgements, estimates and assumptions are reviewed on an on-going basis. Changes in accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period.

If the revision also affects future periods, the change is made prospectively in the relevant periods. Any points of particular importance with regard to judgements, estimates and assumptions are set out in the notes to the income statement and balance sheet items concerned.

Except for the changed useful life of shut-off gas connections as described in 25 Other provisions, no changes in accounting estimates were applied in the 2019 financial statements of Stedin Group. For more information, see note 14 Property, plant and equipment.

Useful life and residual value of property, plant and equipment and intangible assets

The depreciation periods and residual values of property, plant and equipment as well as intangible assets are based on the asset's expected useful technical and economic life. The useful life and residual value are reviewed annually. An asset's useful life or residual value may change as a result of changes in external or internal factors, including technological developments and market developments. These factors can also lead to impairment of an asset. If there is an indication of possible impairment, the asset's recoverable amount is measured and compared with its book value. If the recoverable amount is lower, impairment is applied. For more information, see note 14 Property, plant and equipment.

Fair value of regulated networks

The fair value of regulated networks is determined in alignment with the expected payment method of the ACM. The expected future rates related to Stedin Group's market share and expected limits for possible rate components are included in the calculation method. For more information, see note 14 Property, plant and equipment.

Goodwill

The acquisition price of a subsidiary, joint venture or associate is equal to the amount paid to purchase the interest. If the acquisition price is higher than the share in the fair value at the date of acquisition of the identifiable assets, liabilities and contingent liabilities, the excess is recognised as goodwill.

Goodwill is measured at cost less impairment. Allocated goodwill is allocated to one or more cash-generating units. Allocated goodwill is tested for impairment annually. If the goodwill allocation has not been completed yet, this item will not be tested for impairment annually.

For further details, see note 15 Intangible assets.

Grid losses

Allocation is a process by which estimates are used to determine the quantities of distributed electricity and gas, and allocate them to users. In addition, as part of the allocation process, the grid losses are determined as accurately as possible on the basis of data on standard annual consumption. The consumption levels initially allocated to consumers are adjusted for the actual quantities obtained through meter readings ('reconciliation'), along with a recalibration of the estimates. Pursuant to statutory arrangements on allocation and reconciliation, this process must be settled within 21 months after the end of the month of delivery. The expected results from the reconciliation are estimated as accurately as possible and incorporated in the financial statements. The ultimate settlement based on actual consumption figures may potentially have an effect on future results. The estimate of the obligation in connection with grid losses not yet settled is part of 'Other liabilities and deferred income' as stated in note 28 Trade and other liabilities.

2.4. Effects of the adoption of new IFRS Standards

IFRS 16 Leases

IFRS 16 superseded IAS 17, IFRIC 4, SIC 15 and SIC 27 with effect from 1 January 2019 .

Stedin Group implemented IFRS 16 with effect from 1 January 2019, applying the modified retrospective approach in accordance with IFRS16.C5b. As a result, the comparative information for prior periods has not been restated.

A significant consequence of the implementation of IFRS 16 for Stedin Group as a lessee is that rights and obligations under operating leases are required to be recognised in the balance sheet. As from 1 January 2019, the net present value of the future cash flows is applied as the basis of measurement. This situation led to an increase in the balance sheet of € 103 million. In addition, a shift occurred in the income statement from operational expenses to depreciation and amortisation, and to a very limited extent to financial expenses. In 2019, this situation resulted in a shift of around € 18 million from other operating expenses to depreciation and amortisation (€ 17 million) as well as to interest expense (€ 1 million). In the 2019 cash flow statement, the application of IFRS 16 led to a decrease in cash flow from operating activities by € 17 million, with a simultaneous increase in outgoing cash flow from financing activities by the same amount.

The provisions of IFRS 16.9 were taken into account in assessing whether a contract is, or contains, a lease.

Furthermore, the following practical expedients were applied:

- The existing lease classification of the rental contracts is applied for the current contracts as at 1 January 2019, which means that the difference in financial reporting between finance lease and operating lease has been eliminated with effect from 1 January 2019 for the existing leases in which Stedin Group is a lessee. New leases are treated in accordance with IFRS 16 as from 1 January 2019.
- Existing finance leases with an underlying value of less than € 5,000 or with a term of less than twelve months are not recognised in the balance sheet as of 1 January 2019. The lease payments for those leases are recognised directly in profit or loss.
- When applying the modified retrospective approach, the value of the lease assets newly recognised in the balance sheet is equal on 1 January 2019 to the value of the lease liability. As a result, there is no increase in net assets.

For the purpose of determining the lease liabilities and the right-of-use assets as at 1 January 2019, the incremental borrowing rates at that date were applied. The incremental borrowing rate is determined on the basis of the risk-free market interest rate, increased by a risk premium applying specifically to Stedin Group for a similar term and with a similar security as that which Stedin Group would have to pay in order to borrow the funds to obtain a similar asset on 1 January 2019. The weighted average incremental borrowing rate on 1 January 2019 was 1.4%.

The implementation of IFRS 16 led to an increase in the balance sheet of € 103 million as at 1 January 2019. This figure consists of an increase in lease liabilities with an equal increase in lease assets. These lease liabilities relate to land and buildings as well as lease vehicles.

The difference between the liability under operating leases at year-end 2018 of € 134 million and the recognition of € 103 million as at 1 January 2019 under IFRS 16 is mainly attributable to the non-lease components that are excluded when applying IFRS 16 as well as to the effect of the method for discounting the long-term lease liability under IFRS 16.

As at 31 December 2019, the carrying amount of the right-of-use assets was € 86 million and that of the lease liabilities was € 86 million, subclassified into non-current (€ 72 million) and current (€ 14 million). The right-of-use assets are recognised separately in the balance sheet and the lease liabilities are recognised under interest-bearing debt.

The implementation of IFRS 16 with effect from 1 January 2019 only had a limited effect on ratios. See note 26 Interest-bearing debt and note 34 Credit rating on this topic.

Lessor accounting under IFRS 16 has not changed significantly compared with the current accounting rules under IAS 17. Lessors will classify all leases as under IAS 17, differentiating between operating and finance leases. The disclosures relating to lessor contracts do not affect the 2019 financial statements of Stedin Group. Stedin Group leases business premises and transformers to third parties. The assets are recognised by Stedin Group in property, plant and equipment. Operating lease revenues are recognised in equal amounts through the income statement of Stedin Group as revenues over the term of the lease.

The Dutch State Secretary for Finance stated in 2019 that IFRS 16 cannot be adhered to for tax purposes. The Dutch Tax and Customs Administration will adopt that position as well. As a result, the application of IFRS 16 will give rise to deferred taxation. The changes do not affect deferred taxation as at 1 January 2019. The deferred taxation arose in the course of 2019. The disclosure on deferred taxation is presented in note 18 Deferred tax assets and liabilities.

The table below shows the reconciliation between the total of the contingent liabilities according to Stedin Group's 2018 financial statements and the capitalised lease liability in our 2019 opening balance sheet.

x € 1 million	1 January 2019
Contingent liability disclosed as at 31 December 2018	**134**
Less: non-lease components	**-16**
Less: 'practical expedient' short term leases + low value	**-1**
Less: actual term instead of perpetually renewable leasehold	**-4**
Less: other	**-10**
Lease liability recognised as at 1 January 2019	**103**

3. Operating segments

Business segments are based on Stedin Group's internal organisation and management reporting structure, and have not changed in comparison with the 2018 financial statements of Stedin Group. The segments are:

Segment Stedin

The business segment Stedin comprises the regulated domain: the grid manager Stedin. Stedin manages the gas and electricity networks in its service area.

Segment Joulz

The segment Joulz consists of Joulz Energy Solutions B.V., an expert in designing, building as well as managing complex medium- and high-voltage installations.

With effect from 1 September 2018, Stedin Group sold the commercial activities reported within the segment Joulz to Visser & Smit Hanab. In connection with this sale, the regulated activities of the segment Joulz were integrated within Stedin with effect from 1 July 2018. Therefore, the segment Joulz ceased to exist as of 1 September 2018. The results presented for 2018 accordingly relate to the period from 1 January up to and including 1 September 2018.

Segment DNWG

The business segment DNWG is the entity DNWG Groep N.V., consisting of the grid manager Enduris B.V., which manages the gas and electricity grids in the province of Zeeland; DNWG Infra B.V. (formerly DELTA Infra B.V.), which provides non-regulated electricity, gas, water and data infrastructure services; and DNWG Warmte B.V., which provides heat infrastructure services.

Segment 'Other and eliminations'

The main components of the segment 'Other and eliminations' are the infrastructure, metering and steam network services of NetVerder (in 2018 Joulz Diensten), the activities of the holding company and the elimination of intragroup transactions. The other units are non-reportable segments according to the criteria in IFRS 8 'Operating Segments' since they are not material and are therefore included within the segment 'Other and eliminations'. This segment also includes the discontinued operations of Joulz Services (through April 2019).

Since the balance sheets per operating segment are not periodically reported in the internal management information, Stedin Group has decided not to present these. The accounting policies for the group's financial statements applied by Stedin Group are also applied in segment reporting.

The operating results are not cyclical in nature and are not materially affected by seasonal patterns.

3.1. Net revenues and other income, operating profit and investments by segment

Stedin Group operates solely in the Netherlands and all its revenues are generated in the Netherlands. In accordance with the requirements of IFRS 15, the following table disaggregates the net revenue in 2019 into categories which reflect the way that the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. For the regulated domain, Stedin Group sought alignment wherever possible with the periodic reports required by the Netherlands Authority for Consumers and Markets (ACM). The table also provides a reconciliation of the disaggregated revenue with the segment information on the basis of the internal organisation and management reporting structure:

2019 x € 1 million	Segment Stedin	Segment DNWG	Other and eliminations	Total
Net revenue				
- Regulated electricity transmission, connection and metering services	681	91	-5	767
- Regulated gas distribution, connection and metering services	309	29	-	338
- Infrastructure services and other	45	52	18	115
Other income	13	1	-	14
Total revenue	1,048	173	13	1,234
Operating expenses	622	123	-	745
Depreciation, amortisation and impairments of property, plant and equipment and intangible assets	266	44	7	317
Total operating expenses	888	167	7	1,062
Operating profit	**160**	**6**	**6**	**172**
Financial income and expenses	-27	-4	-36	-67
Profit after income tax subsidiaries	-	-2	249	247
Profit before income tax	**133**	**-**	**219**	**352**
Income tax	-38	-2	13	-27
Result after income tax	**95**	**-2**	**232**	**325**

Investments in 2019 based on the internal organisation and management reporting structure were as follows:

2019 x € 1 million	Segment Stedin	Segment DNWG	Other and eliminations	Total
Investments in property, plant and equipment and intangible assets	539	66	52	657

Revenue and results for and investments in 2018 based on the internal organisation and management reporting structure were as follows:

2018 x € 1 million	Segment Stedin	Segment Joulz	Segment DNWG	Other eliminations	Total
Net revenue	1,024	30	167	49	1,270
Other income	27	46	5	-62	16
Operating expenses	617	76	115	-31	777
Depreciation, amortisation and impairments of property, plant and equipment and intangible assets	254	-	35	8	297
Total operating expenses	871	76	150	-23	1,074
Operating profit	**180**	**-**	**22**	**10**	**212**
Financial income and expenses	-23	-	-4	-45	-72
Profit before income tax from continuing operations	**157**	**-**	**18**	**-35**	**140**
Income tax	-20	-	1	-3	-22
Result after income tax	**137**	**-**	**19**	**-38**	**118**

2018 x € 1 million	Segment Stedin	Segment Joulz	Segment DNWG	Other and eliminations	Total
Investments in property, plant and equipment & intangible assets	538	-	61	8	607

Non-current assets by country

The non-current assets of the Stedin and 'Other and eliminations' segments relate in full to entities registered in the Netherlands.

Major customers

Stedin Group has no customers for which the revenue per customer amounts to 10% or more of total revenue.

4. Net revenue

x € 1 million	2019	2018
Electricity transmission and connection services	742	703
Gas distribution and connection services	308	309
Metering services	55	88
Infrastructure services and other	115	170
Total	**1,220**	**1,270**

Net revenue for 2019 decreased by € 50 million compared with the preceding financial year. This decrease was mainly attributable to the sales of Joulz Diensten in 2019 and Joulz Energy Solutions in 2018. Joulz Diensten had contributed revenue of € 46 million in 2018, whereas Joulz Diensten only added a contribution of € 16 million for a period of four months as at December 2019. Furthermore, Joulz Energy Solutions had contributed revenue of € 30 million in 2018 but none at all in 2019, which led to a decrease of some € 60 million. Revenue from metering services also decreased by around € 33 million due to the refund of surplus profits through the rate reductions that were applied.

This figure was partly offset by increases in revenue from the distribution of electricity and gas, by around € 39 million and € 1 million respectively. The number of low-use connections increased for both gas and electricity at Stedin.

5. Other income

Other income decreased by € 2 million compared with the preceding financial year to € 14 million. Other income includes the revenue from non-regulated services as described in note 2.2.6 Net revenues and other income.

This decrease was attributable to lower revenues from sales of property, plant and equipment.

6. Personnel expenses

x € 1 million	2019	2018
Wages and salaries	245	252
Social security contributions	33	33
Pension contributions	38	34
External staff	61	58
Other employee benefit expenses	28	32
Total	**405**	**409**

Personnel expenses decreased by € 4 million compared with the preceding year.

Employee benefit expenses decreased by € 10 million due to the sale of the commercial operations of Joulz Energy Solutions and Joulz Diensten. This figure was partly offset by an increase of € 6 million in employee benefit expenses due to the increase of the average costs per FTE due to the new company collective labour agreement that came into force as of 1 May 2019 (approximately € 6 million) and to higher costs per FTE due to a greater share of the number of FTEs temporarily hired externally (approximately € 12 million) which was in turn partly offset by a lower provision for employee benefit expenses and accrual for leave days (approximately € 6 million) and lower other cost, like scholing and travelling cost (approximately € 5 million).

Hours worked by hired external staff and directly attributed to own investment projects are deducted from costs of external staff as capitalised production. The amount concerned is € 18 million (2018: € 17 million).

6.1. Number of employees

Average workforce (in FTEs)	2019	2018
Stedin	3,554	3,335
Joulz	-	268
DNWG	639	621
NetVerder	5	-
Overig	50	146
Total average no. of fte	**4,248**	**4,370**
Employed outside the Netherlands	-	-
Male	84%	84%
Female	16%	16%

6.2. WNT compliance for 2019 by Stedin Netbeheer B.V. and Enduris B.V.

The WNT is applicable to Stedin Netbeheer B.V. and Enduris B.V. The applicable maximum remuneration in 2019 was € 194,000. This is the general maximum remuneration.

6.2.1 Remuneration of senior executives

The four members of the Board of Management of Stedin Group are employed by Stedin Netbeheer B.V. on the basis of an employment contract for an indefinite period and all qualify as senior executives pursuant to the WNT. All four members of the Board of Management were appointed after 2013. Therefore, no transitional rules apply. Danny Benima took up his position on 1 January 2019 and became a member of the Board of Management as CFO. The former CFO Gerard Vesseur stepped down as a member of the Management Board with effect from that same date.

The director of Enduris B.V. is employed by DNWG Staff B.V., also on the basis of an employment contract for an indefinite period. Koen Verbogt qualifies as a senior executive *without* employment on a 50% basis for the grid manager Enduris B.V. On 1 May 2019, he had held this position for 12 months. The reporting on his remuneration is therefore split into two separate tables. Table 1 below covers the calendar months in 2019 as from the 13th month of fulfilling his duties, for which purpose the amount of the costs charged to Enduris B.V. has been determined by reference to remuneration as defined for the purposes of the WNT for senior executives *with* employment. This figure constitutes the total of remuneration, the taxed fixed and variable expense allowances, as well as the remuneration payable in future. Table 2 covers the calendar months 1 to 12, for which purpose the remuneration has been determined by reference to the personnel expenses actually charged to Enduris B.V.

Table 1 *Senior executives with employment and senior executives without employment after the 13 month of fulfilling their duties*

Data for 2019 x € 1	Marc van der Linden	Danny Benima	Judith Koole	David Peters	Koen Verbogt
Position details	CEO	CFO	COO	CTO	Director
Start and end dates of duties in 2019	1 January- 31 December	1 January- 31 December	1 January- 31 December	1 January- 31 December	1 May- 31 December
Scope of appointment (in FTEs)	1	1	1	1	0.5
Employment relationship	yes	yes	yes	yes	no
Remuneration					
Remuneration plus taxed expense allowances	172,903	172,935	172,825	173,202	52,042
Remuneration payable in future	21,097	20,954	21,175	20,798	6,941
Sub-total	*194,000*	*193,889*	*194,000*	*194,000*	*58,983*
Maximum remuneration for position holder	194,000	194,000	194,000	194,000	65,110
-/- Amount paid but not owed and not yet refunded	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Total remuneration	**194,000**	**193,889**	**194,000**	**194,000**	**58,983**
Reason for (non-) allowability of excess	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Information on receivable due to amount paid but not owed	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Data for 2018					
Position details	CEO		COO	CTO	see table 2
Start and end dates of duties in 2018	1 January- 31 December	-	1 January- 31 December	1 January- 31 December	-
Scope of appointment (in FTEs)	1	-	1	1	-
Employment relationship	yes	-	yes	yes	-
Remuneration					
Remuneration plus taxed expense allowances	169,704	-	169,521	179,181	-
Remuneration payable in future	19,296	-	19,479	19,823	-
Sub-total	*189,000*	-	*189,000*	*199,004*	-
Maximum remuneration for position holder	189,000	-	189,000	189,000	-
Total remuneration	**189,000**	**-**	**189,000**	**199,004**	**-**

Table 2 *Senior executives without employment in the period of calendar months 1 to 12*

x € 1	Koen Verbogt	
Position details	Director	
Calendar year	**2019**	**2018**
Period of duties in the calendar year (start – end)	1 January- 30 April	1 May- 31 December
Number of calendar months of duties in the calendar year	4	8
Maximum remuneration for position holder		
Maximum hourly rate in the calendar year	187	182
Maximum based on maximum hourly rate	64,826	126,187
Maximum based on standardised amounts per month	78,400	190,000
Maximum remuneration for position holder for entire period of calendar months 1 to 12	191,013*	
Remuneration		
Actual hourly rate lower than the (average) maximum hourly rate?	Yes	Yes
Remuneration in the period concerned	35,225	61,168
Total remuneration for entire period calendar month 1 to 12	96,393	
-/- Amount paid but not owed and not yet refunded	Not applicable	
Total remuneration, excluding VAT	**96,393**	
Reason for (non-)allowability of excess	Not applicable	
Information on receivable due to amount paid but not owed	Not applicable	

* This maximum is based on the maximum hourly rate for senior executives without employment. The maximum reported last year was based on the maximum standardised amount per month.

6.2.2 Remuneration of senior supervisory directors

In 2019, there were again two changes in the composition of the Supervisory Board of Stedin Group. Jules Kortenhorst stepped down as a member of the Supervisory Board with effect from 31 January 2019. In anticipation of his retirement, Hanne Buis had already become a member of the Supervisory Board on 21 September 2018. Doede Vierstra also joined the Supervisory Board as a new member on 20 September 2019. The members of the Supervisory Board qualify as senior supervisory directors under the WNT.

Table 3 *Senior supervisory directors*

x € 1	Pieter Trienekens	Dick van Well	Theo Eysink	Annie Krist	Hanne Buis	Doede Vierstra	Jules Kortenhorst
Position details	Chairman	Member	Member	Member	Member	Member	Member
Start and end dates of duties in 2019	1 January-31 December	1 January-31 December	1 January-31 December	1 January-31 December	1 January-31 December	20 September-31 December	1 January-31 January
Remuneration							
Total remuneration	**29,100**	**19,400**	**19,400**	**19,400**	**19,400**	**5,475**	**1,648**
Maximum remuneration for position holder	29,100	19,400	19,400	19,400	19,400	5,475	1,648
-/- Amount paid but not owed and not yet refunded	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Reason for (non-)allowability of excess	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Information on receivable due to amount paid but not owed	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Data for 2018							
Position details	Chairman	Member	Member	Member	Member	-	Member
Start and end dates of duties in 2018	1 January-31 December	1 January-31 December	1 January-31 December	14 April-31 December	21 September-31 December	-	1 January-31 December
Remuneration							
Total remuneration	**28,350**	**18,900**	**18,900**	**13,567**	**5,282**	**-**	**18,900**
Maximum remuneration for position holder	28,350	18,900	18,900	13,567	5,282	-	18,900

6.2.3 Remuneration of non-senior executives

Besides the senior executives listed above, there were no other executives employed at Stedin Netbeheer B.V. or Enduris B.V. who received remuneration in 2019 exceeding the individually applicable threshold amount.

For the remuneration report as included in the report of the Supervisory Board, see Remuneration report for 2019.

7. Cost of sales and contracted work

x € 1 million	2019	2018
Cost of sales	175	180
Contracted work	125	147
Total	**300**	**327**

The cost of sales and contracted work decreased by € 27 million compared with 2018.

The decrease in the cost of sales and contracted work was caused mainly by the sale of Joulz Diensten and Joulz Energy Solutions, with an impact of around € 49 million, as well as a decrease in the purchase costs of energy of some € 5 million.

This decrease was partly offset by a cost increase relating to external costs, excluding the impact of Joulz Diensten and Joulz Energy Solutions, of some € 21 million and higher cost of material of € 4 million.

8. Other operating expenses

x € 1 million	2019	2018
Municipal sufferance taxes and concessions	71	71
IT costs	46	42
Lease expenses	6	24
Accommodation costs	22	21
Provisions	13	6
Other expenses	62	43
Total	**220**	**207**

Other operating expenses increased by € 13 million compared with the previous year, mainly due to an increase in the customer-related activities, higher legal and consultancy costs, as well as an increase in IT costs. Additionally, a provision was recognised for the removal of gas connections; see note 25 Other provisions.

This increase was partly offset by a decrease in operating expenses due to the sale of Joulz Diensten and a € 16 million decrease in lease expenses that are stated under depreciation as a result of IFRS 16.

Other operating expenses includes, under 'Provisions', € 1 million (2018: € 2 million) as an addition to the provision for expected credit loss.

9. Capitalised own production

Hours worked by own staff and directly attributed to own investment projects are deducted from operating expenses as capitalised production.

Compared with the preceding financial year, capitalised hours increased by € 14 million to € 180 million. The increase was due to further investments in non-current assets, which themselves increased by 6.7%.

Hours worked by external staff attributed to own investment projects are deducted from personnel expenses (external staff); see note 6 Personnel expenses.

10. Depreciation, amortisation and impairment of non-current assets

2019 x € 1 million	Land and buildings, machinery and equipment	Networks	Other	Total
Depreciation and amortisation	14	278	21	313
Disposals	-	4	-	4
Total 2019	**14**	**282**	**21**	**317**

2018 x € 1 million	Land and buildings, machinery and equipment	Networks	Other	Total
Depreciation and amortisation	7	261	9	277
Disposals	1	19	-	20
Total 2018	**8**	**280**	**9**	**297**

Depreciation and amortisation as well as disposals relate to property, plant and equipment as well as intangible assets and to right-of-use assets, and increased by € 20 million compared with 2018. Owing to the implementation of IFRS 16 as from 1 January 2019, the category 'right-of-use assets' relates only to 2019. See note 2.4 Effects of the adoption of new IFRS Standards.

Regular depreciation and amortisation increased by € 36 million, due to an increase in property, plant and equipment as well as right-of-use assets. Disposals decreased by € 16 million. This decrease was attributable in full to disposals in regulated networks.

The disposals of non-current assets excluding the result on disposals amount to € 5 million (2018: € 23 million).

11. Financial income and expenses

x € 1 million	2019	2018
Interest income	-1	-10
Interest expense	67	82
Interest expense lease	1	-
Total	**67**	**72**

The financial income and expenses in 2019 amounted to € 67 million (2018: € 72 million). The financial expenses relate mainly to the interest expense for external financing. In addition, interest was capitalised in 2019 on the assets under construction for an amount of € 3 million (2018: € 3 million).

The interest income of € 10 million in 2018 was non-recurring and relates to the interest received in 2018 in connection with a settlement with the municipality of Rotterdam for the 'Verlegregeling bij de Leidingverordening Rotterdam'.

12. Income tax

Income tax on the result from continuing operations is as follows:

x € 1 million	2019	2018
Current tax expense	20	30
Current tax income prior years	-2	-
Current tax expense and tax income for current year	18	30
Release of deferred taxation due to a change in corporate income tax rates	2	-14
Movements in deferred taxes	7	5
Movement in deferred taxes for prior years	-	1
Income taxes	**27**	**22**

The current tax income and expense on the result from continuing operations is as follows:

x € 1 million	2019	2018
Profit before income tax	**352**	**140**
Participation exemption	-247	-
Non tax-deductible expenses	1	2
Different depreciation methods for tax purposes	-28	-19
Taxable amount	**78**	**123**
Nominal tax rate	25%	25%
Current tax expense	**20**	**30**

The effective tax burden expressed as a percentage of the profit before income tax from continuing operations is as follows:

	2019	2018
Nominal tax rate	**25.0%**	**25.0%**
Effect of:		
- Participation exemption	-17.4%	0.0%
- Non tax-deductible expenses	0.1%	0.3%
- Change in corporate income tax rates	0.7%	-10.1%
- Tax incentives (Energy Investment Allowance)	0.0%	-0.1%
- Corporate income tax for prior years	-0.5%	0.0%
- Other	-0.2%	0.6%
Effective tax rate	**7.7%**	**15.7%**

The corporate income tax is settled between Stedin Holding N.V. and its subsidiaries as if the subsidiaries were independently liable to tax.

13. Assets and liabilities held for sale and share in result of associates

Assets and liabilities held for sale

On 12 March 2019, Stedin Group and 3i Infrastructure signed a purchase agreement in the amount of € 310 million for the acquisition of Joulz Infradiensten B.V. (Joulz Infra) and Joulz Meetbedrijf B.V. (Joulz Meet). The shares were transferred on 30 April 2019. On 1 January 2019, prior to the sale, Stedin Groep Personeels B.V. legally split off the employees working for the benefit of the activities of the respective companies into Joulz Infradiensten B.V.

The companies meet the criteria under IFRS 5 to be classified as 'held for sale' as at 31 October 2018. The assets and liabilities to be sold were therefore presented in the balance sheet as current assets and current liabilities at year-end 2018. The effect on the income statement is that depreciation and amortisation is € 0.6 million lower than if Joulz Meet and Joulz Infra had not been accounted for as held for sale.

On 30 April 2019, the assets and liabilities held for sale were sold for € 310 million. The result from this transaction was € 251 million, which is accounted for under 'Share in result after income tax of associates' and the incoming cash flow under investment activities.

x € 1 million	As at 31 December 2018
Assets	
Machinery and equipment	42
Assets for dispoaal	21
Total	**63**
Liabilities	
Liabilities for disposal	7
Total	**7**

Discontinued operations

There were no transactions in 2019 and 2018 that qualify as discontinued operations.

14. Property, plant and equipment

x € 1 million	Land and buildings	Machinery and equipment	Regulated networks*	Other operating assets	Assets under construction	Total
Historical cost as at 1 January 2018	**37**	**104**	**9,505**	**48**	**4**	**9,698**
Investments	1	3	589	-	9	**602**
Disposals	-	-5	-108	-1	-	**-114**
Reclassification from / to assets held for sale	-	-69	-	-	-	**-69**
Reclassification other	-9	8	65	2	-7	**59**
Historical cost as at 31 December 2018	**29**	**41**	**10,051**	**49**	**6**	**10,176**
Investments	40	3	590	8	3	**644**
Disposals	-	-1	-28	-	-	**-29**
Reclassification from / to assets held for sale	-	-1	-	-	-	**-1**
Reclassification other	1	1	-6	6	-3	**-1**
Historical cost as at 31 December 2019	**70**	**43**	**10,607**	**63**	**6**	**10,789**
Accumulated depreciation and impairment as at 1 January 2018	**15**	**36**	**3,471**	**36**	**-**	**3,558**
Annual depreciation and impairment	1	6	261	5	-	**273**
Disposals	-	-3	-88	-1	-	**-92**
Reclassification from / to assets held for sale	-	-27	-	-	-	**-27**
Reclassification other	-4	4	58	-	-	**58**
Accumulated depreciation and impairment as at 31 December 2018	**12**	**16**	**3,702**	**40**	**-**	**3,770**
Annual depreciation and impairment	3	4	278	4	-	**289**
Disposals	-	-1	-23	-	-	**-24**
Reclassification other	-1	3	-1	-	-	**1**
Accumulated depreciation and impairment as at 31 December 2019	**14**	**22**	**3,956**	**44**	**-**	**4,036**
Net book value as at 31 December 2018	**17**	**25**	**6,349**	**9**	**6**	**6,406**
Net book value as at 31 December 2019	**56**	**21**	**6,651**	**19**	**6**	**6,753**

* Regulated grids also comprises assets under construction.

The net book value of property, plant and equipment increased by € 347 million compared with the preceding year. Stedin Group's investments amounted to € 644 million, and related mainly to the regulated gas and electricity grids as well as to the large-scale offer and installation of smart meters. The disposals related to asset retirements (especially the machinery and equipment in the regulated domain).

Regulated grids also comprise assets under construction. An amount of € 3 million in interest was capitalised on the assets under construction, applying an interest rate of 2.7% (2018: € 3 million, at 3.0%).

Regulated networks are measured at the revalued amount, i.e. the fair value at the date of the revaluation less accumulated depreciation and impairment.

Other property, plant and equipment is recognised at cost less accumulated depreciation and impairment.

The main data used to measure fair value are:

Parameters for measuring fair value of regulated networks

Valuation method (ACM)	Income approach derived from indexed value of regulated assets
Cash flow horizon for networks in years	Remaining term of regulated networks
WACC (ACM) applied in percent	4.04%
Date of change of WACC (ACM)	2021
Market share of Stedin Group in the Netherlands (ACM) in percent	Electricity transmission 24% and gas distribution 26%

The most recent revaluation occured in 2017. There were no changes in the valuation methodology in 2019. The fair value of the grids will be reassessed in 2021, when the new regulation information from the ACM will be available. In 2021, the ACM will publicly disclose this information again, as a result of which the unobservable parameters for fair value measurement of 'level 3' in IFRS 13 will be 'objective market data' again for Stedin Group for that moment.

As described in 'Removing gas connections' in note 25 Other provisions Stedin will accelerate the removal of gas connections that are 'out of operation'. The accelerated removal affects the estimated remaining useful life of the connections concerned. This situation does not affect the 2019 results. For the years 2021–2024, the depreciation on the connections concerned will be brought into line with the remaining useful life.

There were no impairments in 2019.

As at 31 December 2019, the book value of regulated grids at historical cost was € 5,850 million (31 December 2018: € 5,475 million).

15. Intangible assets

The movements in intangible assets in 2019 were as follows:

x € 1 million	Goodwill	Licences and software	Concessions, permits and rights	Total
Historical cost as at 1 January 2018	**77**	**26**	**10**	**113**
Investments	-	4	1	**5**
Disposals	-	-1	-	**-1**
Reclassification other	-	2	-	**2**
Historical cost as at 31 December 2018	**77**	**31**	**11**	**119**
Investments	-	1	1	**2**
Disposals	-	-	-	**-**
Reclassification other	-	-	2	**2**
Historical cost as at 31 December 2019	**77**	**32**	**14**	**123**
Accumulated amortisation and impairments as at 1 January 2018	**-**	**14**	**3**	**17**
Annual amortisation and impairment	-	4	1	**5**
Accumulated amortisation and impairments as at 31 December 2018	**-**	**18**	**4**	**22**
Annual amortisation and impairment	-	5	1	**6**
Accumulated amortisation and impairments as at 31 December 2019	**-**	**23**	**5**	**28**
Net book value as at 31 December 2018	**77**	**13**	**7**	**97**
Net book value as at 31 December 2019	**77**	**9**	**9**	**95**

Goodwill

The goodwill relates to the acquisition of DNWG in 2017. Stedin Group completed the fair value measurement of the identifiable assets and liabilities in the first half of 2018. The finalised goodwill was allocated, on the basis of the synergy benefits, to the cash-generating units Stedin Netbeheer (€ 30 million) and DNWG (€ 47 million).

Impairment test

For the purpose of the annual impairment testing, goodwill arising from the DNWG acquisition was allocated to two cash-generating units (CGUs), Stedin and DNWG, which were determined at the operating segments level.

The book values of the goodwill as at 31 December 2019 were as follows:

x € 1 million	Stedin	DNWG	Total
Book value	30	47	77

Stedin Group carried out an impairment test on goodwill for each CGU as at 30 June 2019. This involves a comparison between the recoverable amount of the CGU and its book value. The fair value is determined based on the recoverable amount. Due to the lack of observable market data, the valuation method is a level 3 fair value within the fair value hierarchy. The recoverable amount functions, where appropriate, as an approximation of the realisable value. In principle, the recoverable amount is based on pre-tax cash flow projections, discounted using a pre-tax weighted average cost of capital (pre-tax WACC).

The estimated projected cash flows for the 2019–2038 period are derived from the Financial Strategic Plan (FSP) of Stedin Group as approved by the Board of Management and Supervisory Board, among other things. The budgets for the CGUs Stedin and DNWG are distinctly included in the FSP, covering the 2019–2024 period. The 2025–2038 period is derived from the extrapolation of the FSP-based projections. The projected investments are based on the Strategic Investment Plan (SIP). The SIP covers a twenty-year projection period (2018–2038). Therefore, 2038 is regarded as a natural starting point for the residual value period.

The following items are the most important factors and assumptions used in the goodwill impairment test:

- the estimated fair value of the regulated assets (the so-called normalised regulated asset value or NRAV);
- the market shares of Stedin and DNWG respectively;
- the profitability of Stedin and DNWG respectively; the return on investment on the regulated assets (real pre-tax WACC), as set by the Netherlands Authority for Consumers and Markets (ACM);
- the long-term inflation forecasts and the long-term growth rate;
- the synergies expected to be realised from the DNWG acquisition;
- the weighted average cost of capital (WACC).

Regarding the aforementioned items, we note the following:

- Stedin Group applies fair value as the valuation principle for its regulated network components. The fair value is derived from the NRAV. As a logical consequence of this accounting policy, the variance between the realisable value and the book value of the regulated assets for both CGUs (Stedin and DNWG) is limited. Accordingly, by definition, there is an increased risk of goodwill impairment.

- The market shares of the CGUs of Stedin and DNWG are based on the relative market shares of Stedin and DNWG in the combined output (samengestelde output, SO) of the sector as a whole. The market shares are based on 2015 data as published by the ACM. It is assumed that both the Stedin and DNWG market shares remain constant in the future.

- The profitability of Stedin and DNWG partly depends on the instrument of 'yardstick competition'. The allowed revenue which the ACM grants to the individual Dutch grid managers for their regulated activities depends on the sector-average costs and the market share of each grid manager. Stedin's market share is approximately 24% for electricity distribution and 26% for gas distribution. DNWG's market share is approximately 2% for electricity distribution and 2% for gas distribution. The system of 'yardstick competition' means that the revenues and future cash flows of Stedin and DNWG are affected by both their own performance and that of other grid managers. The allowable income is revisited by the ACM at the beginning of each five-year regulation period. The underlying data are also published once every five years. As a result, grid managers cannot reliably estimate overperformance or underperformance compared to other regional grid managers during a regulatory period, nor the potential impact on their future cash flows.

- In view of the deviations between the individual performance of Stedin and DNWG compared to the benchmark, a convergence assumption of eight years was used in the determination of the realisable value of both CGUs. This assumption means that the performance of Stedin and DNWG is deemed to be the same as that of other grid managers effective from 2027.

- The capital costs as defined by the ACM constitute an important cost component for determining the sector-average costs. The capital costs include depreciation charges based on regulatory accounting principles as well as a return on the NRAV on the basis of the real pre-tax WACC. The ACM determines the WACC based on relevant market parameters and corporate finance theories. The WACC assumptions utilised by Stedin Group management for its projections are derived from the WACC published by the ACM, with the exception of inflation assumptions. With regard to the latter, management's own estimates have been used. For the next regulation periods as of 2022 onwards, Stedin Group management made its own estimate for the regulated WACCs. These WACCs are primarily derived from i) market observations with regard to the relevant parameters such as interest rates, risk profiles, market fees and capital ratios, and ii) the approach utilised by the ACM to define the WACC. The WACCs were used for two objectives, namely for the return on the NRAV and for the discount rate. The post-tax WACC of Stedin and DNWG is a weighted average for the regulated (3.0%) and non-regulated activities (8.5%).

- The long-term growth rate that was used to determine the terminal values of the two CGUs is conservatively estimated at 0%. For the projection period until 2038, a growth rate has been used that is equal to the expected inflation (2%). This has been chosen to remain consistent with the SIP period, which ends in 2038.

- The synergies expected to be realised from the DNWG acquisition are equal to the amounts reflected in the FSP.

For both Stedin and DNWG, the buffer between the net book value and the net realisable value is relatively small due to the fact that the fair value is used as the valuation principle for regulated assets. Based on the above assumptions, the buffer for Stedin and DNWG is estimated at approximately € 308 million (6%) (2018: € 350 million (7%)) and € 21 million (3.4%) (2018: € 35 million (6%)) respectively.

Based on the impairment test carried out on 30 June 2019 as well as additional analysis, there is no indication as at 31 December 2019 that the goodwill associated with both CGUs is impaired.

The outcome of the impairment test depends on changes in certain key estimates and assumptions. The most important ones are:

- the investment levels;
- the market share;
- the convergence assumption;
- the WACC;
- the long-term growth rate.

Stedin Group performed a sensitivity analysis of changes in the key assumptions and estimates that were used to determine the realisable value for both CGUs. Stedin Group is of the opinion that any reasonably possible change in the key assumptions on which the realisable values are based will not lead to a decrease of the realisable value below the book value. The sensitivities to changes in key assumptions on which the realisable values of Stedin and DNWG are based are described below:

- If 1% of the regulated investments is not earned back via future tariffs (for example, due to inefficiencies), the result is a decrease in the realisable value of Stedin by € 38 million and of DNWG by € 4 million.

- A decrease in the expected market share, resulting from a decrease in efficient investments by 5%, results in a decrease in the realisable value of Stedin by € 2 million and of DNWG by € 1 million.

- A one-year delay in the convergence assumption results in a decrease in the realisable value of Stedin by € 90 million and of DNWG by € 26 million.

- An increase in the regulated discount rate (the WACC) of 0.1% results in a decrease in the realisable value of Stedin by € 110 million and of DNWG by € 13 million.

- A decrease of the long-term growth rate by 0.5% results in a decrease in the realisable value of Stedin by € 74 million and of DNWG by € 10 million.

None of the above sensitivities result in a negative buffer nor an impairment indication.

16. Right-of-use assets

x € 1 million	Land and buildings	Lease vehicles	Total
Right-of-use assets as at 1 Janury 2019	**72**	**31**	**103**
Investments	1	10	**11**
Contract modifications	6	-1	**5**
Disposals	-16	-1	**-17**
Right-of-use assets as at 31 December 2019	**63**	**39**	**102**
Accumulated depreciation as at 1 January 2019	**-**	**-**	**-**
Annual depreciation and impairment	7	10	**17**
Disposals	-	-1	**-1**
Accumulated depreciation as at 31 December 2019	**7**	**9**	**16**
Net book value as at 31 December 2019	**56**	**30**	**86**

Stedin Group has entered into operating leases for a number of business premises and land. In addition, Stedin Group leases a vehicle fleet. The disposals of land and business premises relate to the rental of premises in Utrecht. At the start of 2019, these premises were bought by Stedin Group, leading to a shift in the balance sheet from 'right-of-use assets' to 'property, plant and equipment'. The other disposals relate to lease vehicles, for which new lease contracts have been entered into for comparable assets.

Information on the lease liabilities is provided in 26 Interest-bearing debt.

The table below presents the total lease expenses for 2019:

x € 1 million	2019
Depreciation charges for right-of-use assets	**-17**
Interest expense on lease liabilities	**-1**
Lease liabilities < € 5.000	**-**
Lease liabilities < 1 year	**-**
Variable lease payments	**-**
Total	**-18**

17. Associates and joint ventures

x € 1 million	2019	2018
Book value as at 1 January	**5**	**5**
Share in profit after income tax	-2	-
Book value as at 31 December	**3**	**5**

This table relates to the 33.3% interest in Zebra Gasnetwerk B.V. (below: Zebra). Zebra is the grid manager of the main distribution pipeline for high-calorific gas from Zelzate to Moerdijk. In August 2019, Enexis Netbeheer and Enduris (subsidiaries of Stedin) reached agreement with the national grid manager Gasunie Transport Services (GTS) on the sale of the extra high-pressure networks owned by ZEBRA Gasnetwerk as well as Enexis Netbeheer and Enduris. The date of sale will be 31 December 2020. The associate has been accounted for at the recoverable amount as at 31 December 2019.

18. Deferred tax assets and liabilities

Deferred tax assets and liabilities are as follows.

x € 1 million	Assets as at 31 December 2019	Assets as at 31 December 2018	Liabilities as at 31 December 2019	Liabilities as at 31 December 2018
Property, plant and equipment	-	-	250	229
Intangible assets	-	1	-	-
Right-of-use assets	-	-	-	-
Cash flow hedges	20	17	-	-
Provisions	2	2	-	-
Interest-bearing debt	-	-	4	3
Total	**22**	**20**	**254**	**232**

Deferred tax assets and liabilities relate mainly to property, plant and equipment and cash flow hedges taken through group equity.

Movements in deferred taxes during 2019 are as follows:

x € 1 million	Net balance as at 1 January 2019	Recognised in profit or loss	Recognised in other comprehensive income	Net balance as at 31 December 2019	Assets	Liabilities
Property, plant and equipment	229	9	12	250	-	250
Intangible assets	-1	1	-	-	-	-
Cash flow hedges	-17	-	-3	-20	20	-
Provisions	-2	-	-	-2	2	-
Interest-bearing debt	3	1	-	4	-	4
Deferred income tax liabilities (assets) for netting	**212**	**11**	**9**	**232**	**22**	**254**
Netting off					-22	-22
Total					**-**	**232**

The major portion of the deferred tax on property, plant and equipment relates to the difference between the carrying amounts and tax bases in the valuation of the networks. The deferred tax liability relating to property, plant and equipment was caused mainly by the difference between the book values and tax bases in the valuation of the networks at the time of the introduction of corporate income tax for Stedin Group, accelerated depreciation for tax purposes applied in the past, the revaluation of the networks and the valuation of the acquired networks as part of the accounting for the acquisition of DNWG.

In December 2019, the Upper House of Dutch Parliament approved the bill to increase the corporate income tax rate to 25% in 2020, and then to 21.7% in 2021 and subsequent years. Calculations performed in 2018 still applied rates of 22.55% for 2020 and 20.5% as from 2021, which were the future statutory rates in 2018 but which were changed in 2019 to 25% and 21.7% respectively. This means that, depending on the expected time of realisation, the deferred tax assets and liabilities will be settled at different rates. The valuation of the deferred tax assets and liabilities as at 31 December 2019 is based on the rates applicable at the estimated times of realisation.

	As at 31 December 2019	As at 31 December 2019	
	old rates	new rates	Difference
Deferred tax assets	20	22	-2
Deferred tax liabilities	-239	-254	15
Netted	**-219**	**-232**	**13**

Released to income statement	-2
Addition charged to cash flow hedge reserve	1
Released to the revaluation reserve in equity	-12
Total	**-13**

Movements in deferred taxes during 2018 are as follows:

x € 1 million	Net balance as at 1 January 2018	Recognised in profit or loss	Recognised in other comprehensive income	Net balance as at 31 December 2018	Assets	Liabilities
Property, plant and equipment	277	-7	-41	229	-	229
Intangible assets	-1	-	-	-1	1	-
Cash flow hedges	-21	-	4	-17	17	-
Provisions	-2	-	-	-2	2	-
Interest-bearing debt	4	-1	-	3	-	3
Deferred tax liabilities (assets) before netting	**257**	**-8**	**-37**	**212**	**20**	**232**
Netting off					-20	-20
Total					**-**	**212**

Expiration periods for deductible temporary differences as at 31 December 2018 are as follows:

Category	Period
Property, plant and equipment	1 - 50 years
Intangible assets	1 - 25 years
Cash flow hedges	1 - 30 years
Provisions	1 - 10 years

19. Derivative financial instruments

Fair value of derivative financial instruments:

x € 1 million	Assets as at 31 December 2019	Liabilities as at 31 December 2019	Assets as at 31 December 2018	Liabilities as at 31 December 2018
Currency swap and forward contracts	39	52	26	56
Total	**39**	**52**	**26**	**56**

The classification by maturity is set out below:

x € 1 million	Assets as at 31 December 2019	Liabilities as at 31 December 2019	Assets as at 31 December 2018	Liabilities as at 31 December 2018
Classification				
Current / short term	-	-	11	-
Non-current / long term	39	52	15	56
Total	**39**	**52**	**26**	**56**

All derivative financial instruments have been assigned to a hedging relationship, and value changes of these instruments are recognised directly in group equity and presented in the cash flow hedge reserve, where applicable. More information on movements in that reserve and the expected cash flows is provided in note 33.4 Derivative financial instruments and cash flow hedge reserve.

20. Inventories

Inventories were unchanged compared with the preceding financial year. An obsolescence allowance of € 2 million has been deducted from the value of inventories (2018: € 3 million).

An amount of € 1 million within the obsolescence allowance relates to meters (2018: € 1 million).

21. Trade and other receivables

Trade and other receivables includes mainly amounts receivable from customers and amounts not yet invoiced (contract assets) for the provision of transmission services.

This item can be broken down as follows:

x € 1 million	As at 31 December 2019	As at 31 December 2018
Trade receivables	120	115
To be invoiced	44	37
Other receivables and accruals	8	3
Total	**172**	**155**

Note 33.2 Credit risk states the age and impairments of the trade receivables and contract assets.

Trade receivables increased by € 5 million compared with the preceding year. This increase was mainly attributable to a higher gross position of the receivables from energy companies due to higher revenue in December 2019 and the reduction of the bad debts provision as a result of a withdrawal from the provision related to old amounts outstanding.

In addition, a higher balance of prepaid amounts is outstanding, as a result of higher prepayments. A higher balance is also outstanding for amounts not yet invoiced (non-energy) of € 5 million. This balance is due to a receivable in respect of the purchaser of Joulz Diensten concerning sold leased transformers on which discussions with the tax authorities are ongoing.

Lastly, the work in progress position increased compared with the previous year, due to more projects in progress at year-end 2019.

22. Cash and cash equivalents

At 31 December 2019, cash and cash equivalents comprised bank balances of € 37 million and short-term cash loans of € 35 million (2018: bank balances of € 49 million, short-term cash loans of € 120 million). Cash and cash equivalents are held mainly in euros. Cash and cash equivalents that are not freely available to Stedin Group amounted to € 0.1 million (2018: € 0.1 million) at year-end.

23. Group equity

Share capital

Stedin Holding N.V.'s authorised share capital is € 2 billion, divided into 20 million shares with a nominal value of € 100 each. At 31 December 2019 and 2018, 4,970,978 shares had been issued and fully paid.

Share premium

Stedin Holding N.V. (formerly Eneco Holding N.V.) was incorporated in 2000. At that time, the shareholders of N.V. Eneco acquired a capital interest in the company by contributing their capital interests in N.V. Eneco to Stedin Holding N.V. Insofar as the value of that interest exceeded the nominal value of the shares, the excess value was taken to share premium. The share premium reserve can be regarded as paid-up share capital.

The share premium reserve was used for unbundling the energy company Eneco in the form of a repayment in kind to the shareholders.

Revaluation reserve

The revaluation reserve relates to the revaluation of networks and network-related assets at fair value. The difference between depreciation based on the revalued book value and depreciation based on the original historical cost, less deferred tax, was transferred from the revaluation reserve to retained earnings. The revaluation reserve is not freely at the disposal of the shareholders. The revaluation reserve amounted to € 720 million at year-end 2019 (2018: € 754 million). In 2019, € 12 million was withdrawn from the revaluation reserve (added to the deferred tax liability) as a consequence of the adjustment of the corporate income tax rate.

Cash flow hedge reserve

The cash flow hedge reserve is not freely at the disposal of the shareholders. More information on the movements and the underlying hedging relationships is set out in note 33.4 Derivative financial instruments and cash flow hedge reserve.

Perpetual subordinated bond loan

On 1 December 2014, Stedin Holding N.V. issued a perpetual subordinated bond loan ('Perpetual Fixed Rate Reset Securities') with a total nominal amount of € 500 million at an annual coupon interest of 3.25% and an issue price of 99.232%. This resulted in net proceeds of € 496 million. Directly attributable costs of € 3 million were deducted from these proceeds, resulting in an addition of € 493 million to the group equity in 2014. The bonds are listed on the Euro MTF Market of the Luxembourg stock exchange. On 31 December 2019, the market value was € 526 million. The book value at year-end 2019 was € 501 million, which is the nominal principal amount including € 1 million in accrued interest.

The perpetual subordinated bond loan is regarded as an equity instrument and is subordinated to all of Stedin Group's creditors but has certain preferences over the shareholders in the event of the company being wound up. Stedin Holding N.V. has no contractual obligation to redeem the loan. Any payment of current or deferred coupon interest is conditional and dependent on distributions to shareholders. Consequently, the bondholders cannot force Stedin Holding N.V. to pay the coupon interest or to redeem all or part of the loan.

24. Provisions for employee benefits

x € 1 million	Long-service benefits	Other	Total
As at 1 January 2018	**19**	**4**	**23**
Additions	2	1	3
Withdrawals	-1	-1	-2
Release	-6	-1	-7
As at 31 December 2018	**14**	**3**	**17**
Additions	-	3	3
Withdrawals	-3	-1	-4
Release	-1	-	-1
As at 31 December 2019	**10**	**5**	**15**

Classification (x € 1 million)	As at 31 December 2019	As at 31 December 2018
Current	3	4
Non-current	12	13
Total	**15**	**17**

Long-service benefits

This provision covers the obligation to pay amounts to employees on achieving a certain number of years of service and on the retirement of employees.

The following actuarial assumptions were used for the provisions:

	31 December 2019	31 December 2018
Discount rate	1.0%	1.6%
Future salary increments	1.4% - 3.0%	1.3 - 3.0%
Mortality table	GBM & GBV 2013-2018	GBM & GBV 2012-2017

Long-service payments are made over the long term. The provision is remeasured annually using current employee information.

25. Other provisions

x € 1 million	Other provisions
As at 1 January 2018	**23**
Additions	3
Withdrawals	1
Release	-3
As at 31 December 2018	**24**
Additions	14
Withdrawals	-3
Release	-3
As at 31 December 2019	**32**

Classification (x € 1 million)	As at 31 December 2019	As at 31 December 2018
Current	2	2
Non-current	30	22
Total	**32**	**24**

The other provisions amount to € 32 million (2018: € 24 million), comprise several provisions of different kinds and are mainly of a long-term nature. They include, for instance, a provision for legal proceedings and claims of € 6 million (2018: € 9 million) and for obligations amounting to € 9 million entered into on behalf of Stichting Zeeuwse Publieke Belangen (2018: € 9 million). In addition, the provision for the accelerated removal of 'gas connections out of operation' of € 12 million was recognised. See below for more detailed information. The expected period in which an outflow of resources from these provisions will occur exceeds one year.

The provisions were discounted in 2019 using rates ranging up to 1,0% (2018: 1,5%).

Stichting Zeeuwse Publieke Belangen

Stichting Zeeuwse Publieke Belangen is a unique alliance between the province of Zeeland, the municipalities of Zeeland and Stedin Group. The foundation was established to safeguard the arrangements concerning the sale of DNWG/Enduris to Stedin Group in terms of employment, energy supply and the energy transition, among other things. The foundation makes a budget available to promote the energy transition in Zeeland.

Removal of gas connections

In the first half year of 2019, grid managers agreed at the industry level in Netbeheer Nederland that removing gas connections is no longer to be performed at the discretion of grid managers but will be accelerated with a view to safety and be subject to supervision by SodM. This agreement relates to shut-off gas connections which have the status 'out of operation' but which are still 'pressurised'. The related costs are not charged in full to existing and former customers. In 2019, a provision was recognised and charged to operating expenses for an amount of € 12 million.

Stedin Group expects to have removed the gas connections concerned by the end of 2024. The accelerated removal affects the estimated remaining useful life of the connections concerned. Depreciation due to the change in useful life does not affect the 2019 results. For the years 2020–2024, the depreciation on the connections concerned will be brought into line with the remaining useful life.

26. Interest-bearing debt

Classification (x € 1 million)	As at 31 December 2019	As at 31 December 2018
Current	19	496
Non-current	2,985	2,548
Total	**3,004**	**3,044**

Movements in interest-bearing debt:

x € 1 million	2019	2018
As at 1 January	**3,044**	**2,753**
New non-current interest-bearing debt	492	493
New current interest-bearing debt	727	880
Repayments of non-current interest-bearing debt	-648	-202
Repayments of current interest-bearing debt	-727	-905
Lease liabilities	86	-
Foreign currency exchange differences	17	20
Interest rate swaps	10	-
Other movements	3	5
As at 31 December	**3,004**	**3,044**

The maturities of the interest-bearing debts are presented below:

x € 1 miljoen	As at 31 December 2019	As at 31 December 2018
Within1 jaar	19	496
1 to 2 years	94	150
2 to 3 years	538	78
3 to 4 years	10	528
4 to 5 years	126	-
After 5 years	2,217	1,792
Total	**3,004**	**3,044**

Most interest-bearing debts as at 31 December 2019 were contracted by Stedin Holding N.V. and no collateral has been provided. More information on interest-bearing debt is included in 33 Financial risk management.

The lease liabilities that are capitalised as of 1 January 2019 as a result of the application of IFRS 16 are included in interest-bearing debt. For further details, see note 2.4 Effects of the adoption of new IFRS Standards. For information on the right-of-use assets, see 16 Right-of-use assets

The total lease liability as at 31 December 2019 was € 86. The maturities of this lease liability are: € 14 within 1 year, € 41 from 1 to 5 years and € 31 after 5 years.

There is no liquidity risk for the lease liabilities arising from right-of-use assets. The lease liabilities are monitored by the Corporate Control department.

The following significant financing transactions took place in 2019:

- Stedin Group successfully issued its first green bond. The € 500 million raised are linked to investments made by Stedin Group in sustainable projects. The loan of € 500 million has a term of 10 years, an issue price of 98.658% and a coupon interest of 0.5% (effective interest rate of 0.639%).
- The Euro Medium Term Note programme was extended in 2018 and the amount was increased from € 2 billion to € 3 billion.
- Several loans were repaid during 2019, for an aggregate amount of € 1.4 billion.

Some of the loans are subject to financial covenants, which are set out below:

- a gearing ratio (Total net borrowings / Total capitalisation) lower than 70%;
- an interest coverage ratio (EBITDA / net interest expense) higher than 3.

The above ranges for ratios are assessed at the end of each measurement period.

The following definitions apply,

- Measurement period: 12-month moving average per 31 December and 30 June of each financial year.
- Total net borrowings: Sum of current and non-current interest-bearing debt, minus cash and cash equivalents.
- Total capitalisation: Sum of current and non-current interest-bearing debt and total group equity adjusted for goodwill, intangible assets and minority interests.
- EBITDA: Profit before income tax, adjusted for depreciation, amortisation and impairment of non-current assets, financial income and expenses, profit after income tax from discontinued operations, revaluations, one-off items and share of profit of minority interests.
- Net interest expense: Sum of financial income and expenses.

Stedin Group implemented IFRS 16 with effect from 1 January 2019. Its impact included an increase in interest-bearing debt, an increase in total equity and an increase in EBITDA. Due to the relatively small impact of the adoption of IFRS 16 on interest-bearing debt and EBITDA, the effect on the ratios is minimal.

The tables below show that Stedin Holding N.V. complied with the conditions stated above during 2019.

Gearing ratio	2019	2018
Principal amounts payable of interest-bearing debt	3,004	3,044
Cash and cash equivalents	-72	-169
Net debt	2,932	2,875
Principal amounts payable of interest-bearing debt	3,004	3,044
Equity	2,949	2,699
Equity adjustments	-95	-97
Total equity	5,858	5,646
Gearing ratio	**50.1%**	**50.9%**

Interest coverage ratio	2019	2018
Profit before income tax	352	140
Depreciation and amortisation	317	297
Financial income and expenses	67	72
Profit after income tax of group entities sold	-247	-
EBITDA	489	509
Net interest payable	70	74
Interest coverage ratio	**7.0**	**6.9**

27. Deferred income

x € 1 million	2019	2018
Book value at 1 January	648	554
Customer construction contributions received	96	112
Income recognised	-19	-18
Book value at 31 December	**725**	**648**

Classification	2019	2018
Current	18	16
Non-current	707	632
Total	**725**	**648**

The short-term deferred income is reported under 'contract liabilities' in 'Trade and other liabilities'.

28. Trade and other liabilities

x € 1 million	As at 31 December 2019	As at 31 December 2018
Trade liabilities	86	66
Accrued and other liabilities	161	182
Contract liabilities	23	24
VAT	24	25
Pension contributions	4	3
Total	**298**	**300**
Classification		
Current	297	299
Non-current	1	1
Total	**298**	**300**

Trade and other liabilities decreased by € 2 million compared with 2018. The grid loss reserve amounted to € 6 million (2018: € 10 million) and is reported under 'Accrued and other liabilities'.

29. Current tax assets and liabilities

Current tax assets and liabilities are as follows:

x € 1 million	As at 31 December 2019	As at 31 December 2018
Corporate income tax	20	21
Total current tax assets	**20**	**21**

x € 1 million	As at 31 December 2019	As at 31 December 2018
Corporate income tax	-	-
Total current tax liabilities	**-**	**-**

30. Contingent assets and liabilities

Contingent assets and liabilities other than guarantees are presented at present value. Present value is calculated using a discount rate that reflects current market assessments of the time value of money. The used discount rate is the Euro zero coupon yield curve.

Energy purchase commitments

Stedin Group has energy purchase commitments to offset administrative and technical grid losses. Based on the rates applicable in 2019, the obligation amounts to € 361 million (2018: € 294 million) and relates to the period from 2020 to the end of 2031.

Investment obligations

At 31 December 2019, Stedin Group had entered into investment obligations for a total amount of € 5 million (2018: € 38 million). These investment obligations relate mainly to investments in smart meters. The investment obligations have been entered until 2020.

Other obligations

In addition, Stedin Group entered into contractual obligations for an amount of € 8 million (2018: € 8 million). These are mainly contractual obligations for maintenance.

Guarantees

Stedin Group has issued group and bank guarantees to third parties of € 33 million (2018: € 34 million). Of that total, Stedin Holding N.V. issued € 27 million (2018: € 28 million) of guarantees. The full amount of € 27 million (2018: € 27 million) concerns 'parent company guarantees'. The remaining guarantee has been issued by a subsidiary.

Stedin Group has taken out directors' and officers' liability insurance for the members of the Supervisory Board, the members of the Board of Management, the directors and other executives within Stedin Group. To the extent possible, the directors are indemnified by Stedin Group, subject to specific conditions, against costs in connection with civil law, criminal law or administrative law proceedings in which they could be involved because of their position.

Results 'Meetdomein'

The rates that Stedin charges as a grid manager for low-use meter rental are regulated and based on the Ministerial Metering Tariff Regulation (Ministeriële Regeling Meettarieven, MR), which lays down how the ACM sets such rates. The maximum rates that grid managers may charge are currently based on the 2005 rate levels, plus an annual inflation adjustment in accordance with the consumer price index. The ACM has monitored the costs associated with performing the metering task since 2011. It should be possible with this regard to fund the Large-Scale Roll-Out of Smart Meters project from the returns that are achieved. The Ministerial Metering Tariff Regulation ensures that consumers ultimately do not pay more than the break-even rates and that the grid managers do not make surplus profits. To this end, the ACM may include the returns achieved in future decisions on rates. We currently estimate that Stedin has achieved sufficient returns at this moment in order to fund smart meter introduction without the need to increase rates. In 2018, a rate reduction amounting to € 20 million was applied in the metering domain in keeping with this estimate.

Legal proceedings

Stedin Group is involved either as plaintiff or defendant in various legal and regulatory claims and proceedings related to its operations. The amounts claimed in some of these proceedings may be significant to the consolidated financial statements. Liabilities and contingencies in connection with these claims and proceedings are assessed periodically based on the latest information available. A liability is only recognised if an adverse outcome is considered to be probable and the amount of the loss can be reasonably estimated; see note 25 Other provisions.

Stedin is involved with several municipalities in claims for municipal sufferance taxes. The potential impact for Stedin is a receivable ranging up to approximately € 26 million. Due to uncertainties, this potential receivable is not recognised in the balance sheet as at 31 December 2019.

Fiscal unity

Stedin Holding N.V. forms a fiscal unity for corporate income tax purposes with all its consolidated participating interests as included in note 37 List of subsidiaries. The companies, including Stedin Holding N.V., that are part of a fiscal unity are jointly and severally liable for the tax obligations of that fiscal unity.

There is also a fiscal unity for VAT purposes that includes Stedin Holding N.V. and all its consolidated participating interests as included in note 37 List of subsidiaries. Only companies, including Stedin Holding N.V., that are part of a fiscal unity are jointly and severally liable for the tax obligations of that fiscal unity.

Cash pool

Under its participation in the Stedin Group cash pool, Stedin Holding N.V., like the other participants, is jointly and severally liable for deficits in Stedin Group's cash pool.

31. Related party transactions

Related parties are entities affiliated with Stedin Group in which key management (or their family) of Stedin Group has reporting or partial control or decisive influence. Associates and joint ventures are related parties of Stedin Group. Transactions with related parties take place on terms of business normally prevailing with independent third parties.

Receivables outstanding from associates concern loans granted for an amount of € 15 million (2018: € 15 million) and are mainly of a long-term nature. In 2019, € 3 million of loans were granted and € 3 million of repayments were received. The loans have a term of five years, at interest rates varying from 0.3% to 2.6%. Receivables and liabilities in respect of related parties are not covered by collateral and are paid by bank.

Related parties in which members of the Supervisory Board or members of the Board of Management are or were involved are as follows:

- Stichting Zeeuwse Publieke Belangen is coordinated from within Stedin Group under the Samen Sterker programme. Its governing board is composed of the following individuals: David Peters (succeeded Judith Koole as of 15 November 2018 on behalf of Stedin Group), Koen Verbogt (succeeded Gerard Vesseur as of 20 February 2019 on behalf of Stedin Group), Carla Schönknecht (province of Zeeland) and Loes Meeuwisse (succeeded Ad Schenk as of 1 September 2018 on behalf of the Association of Municipalities in Zeeland). The fund is financed by Stedin up to a maximum of € 10 million. In 2018, the governing board of the foundation committed € 1.2 million to six approved project proposals and paid out € 0.2 million.
- The object of Stichting OUNZ (OUNZ foundation) is to hold ownership of the rights of principal superficies with regard to the grids of DNWG Group and to provide rights of subsuperficies with regard to the gas grids as well as the electricity grids to DKCN, Evides and Enduris in order to carry out grid manager tasks. Stedin has the right, through Enduris, to appoint one of the three directors of Stichting OUNZ. The value of the rights is not material, and there are no other material financial transactions between Stedin and OUNZ.
- Supervisory Board member Annie Krist is CEO of GasTerra, which engages in trading and supplying natural gas. Stedin has no direct relationship with GasTerra.
- Supervisory Board member Pieter Trienekens is a member of the Supervisory Board of DNV Kema in Arnhem. DNV is a supplier of Stedin Group.
- Supervisory Board member Dick van Well is a member of the Supervisory Board of Dura Vermeer Groep N.V. Dura Vermeer is a supplier of Stedin Group.
- Supervisory Board member Theo Eysink is CFO of the Business Market Division of KPN N.V. KPN is a supplier of Stedin Group.

The aforementioned persons were not involved in commercial transactions between the named suppliers and Stedin Group. Contract reviews, negotiations or awards between the two companies were effected at arm's length terms and conditions.

Note 6 Personnel expenses provides details of the remuneration of members of the Board of Management and the Supervisory Board. These persons are 'key management'. There is no other relationship between the members of the Management and Supervisory Boards and Stedin Group except that of customer on normal arm’s length terms and conditions.

Other relationships with parties:

- The municipality of Rotterdam is the largest shareholder of Stedin Group (approximately 31.7%) and has significant influence. There is no relationship other than the shareholder relationship, except that of customer and supplier at normal arm’s length terms and conditions. Stedin Group applies the exemption from detailed disclosures on related party transactions with government-related entities (IAS 24).
- Stedin takes initiatives in the areas of innovation and improving sustainability, and actively maintains alliances and associations with various stakeholders. Collaboration can take various shapes, such as through Netbeheer Nederland or on a project basis, as a sponsor or more systematically through foundations, such as Stichting ElaadNL, Stichting EVnetNL or USEF, in which Stedin can participate as a director. These parties are not related parties.

2019 x € 1 million	Purchased goods & services	Recharging of employee benefits, facilities and other expenses
Joint arrangements		
Utility Connect B.V.	7	1
TensZ B.V.	2	6
TeslaN B.V.	4	5
Infra Netwerkgroep Omexom VOF	-	-
Total	**13**	**12**
Associates		
Energie Data Services Nederland B.V.	14	-
Zebra Gasnetwerk B.V.	1	-
Total	**15**	**-**

2018 x € 1 million	Purchased goods & services	Recharging of employee benefits, facilities and other expenses
Joint arrangements		
Utility Connect B.V.	6	1
TensZ B.V.	1	8
TeslaN B.V.	6	5
Infra Netwerkgroep Omexom VOF	-	-
Total	**13**	**14**
Associates		
Energie Data Services Nederland B.V.	9	-
Zebra Gasnetwerk B.V.	-	-
Total	**9**	**-**

32. Auditors' fees

The fees below concern auditors' fees and advisory services provided by Stedin Group's external auditor: Deloitte Accountants B.V., as defined in Section 1.1 of the Audit Firms (Supervision) Act (Wet toezicht accountantsorganisaties, Wta) and the entities associated with the Deloitte network.

x € 1.000	2019	2018
Audit of the financial statements	1,163	1,104
Other audit engagements	304	331
Other non-audit services	-	-
Totaal	**1,467**	**1,435**

In the fee for the audit of the financial statements of Stedin Holding N.V., all auditor's fees required to be incurred in order to audit the consolidated and separate financial statements of the company are attributed to the financial year to which the financial statements apply.

The other audit engagements concern audits concerning the statutory financial statements of subsidiaries and related engagements.

Other non-audit services concern services permitted under the Wta and partly charged by entities associated with the Deloitte network. Since 24 October 2017, Stedin Holding N.V. is qualified as a public interest entity (PIE). Hence, as of that date, a prohibition applies on performing the engagement for the statutory audit of the financial statements if the audit firm or another part of its network provides or has provided services other than audit services to Stedin Holding N.V. and its affiliated entities during the period in which independence is required. Since that time, the auditor's engagement has only covered audit engagements.

33. Financial risk management

Capital management

The primary goal of Stedin Group's capital management is to safeguard access to the capital and money markets in order to optimise its financing structure and costs in accordance with the long-term financial plan and economic parameters determined by the regulator in each regulation period. Given the capital-intensive nature of the company, it is important to be able to contract financing in various different financing markets and thereby create a balanced financing mix. Stedin Group can influence its capital structure by altering its leverage ratio. Stedin Group regards both capital (including the perpetual subordinated bond loan) and non-subordinated debt as relevant components of its financing structure and therefore of its capital management. The present interest-bearing debt was raised in roughly equal proportions in the US private placement market, the European bond market and the private loan market. In addition to maintaining relationships with these existing investors in the above-mentioned financing markets, Stedin Group also maintains relationships with six Dutch and international banks that have all made financing capacity available to Stedin. These banks can also offer a wide range of financial products and services if required.

Since 2017, a Stedin Group financing strategy was formulated that targets the ratios which are relevant for the credit rating and particularly the core ratio: cash flow from operating activities/net interest-bearing debt. In this context, for the purpose of calculating the ratios, the perpetual subordinated bond loan issued in 2014 is classified by Standard & Poor's as an instrument with a 50% equity and 50% debt component. This qualification differs from the treatment under IFRS, for which the perpetual subordinated bond loan is treated entirely as equity. Net interest-bearing debt (excluding discontinued operations) is defined as non-current and current interest-bearing debt less cash and cash equivalents.

Financial risk management

The following financial risks can be identified in connection with the ordinary business operations: market risk, credit risk and liquidity risk. **Market risk** is the exposure to changes in value of current or future cash flows and financial instruments due to changes in market prices. Within this category, Stedin is mainly exposed to currency and interest rate risks.

Credit risk can be defined as the potential loss if a counterparty or its guarantor cannot or will not meet its contractual obligations.

The **liquidity risk** is the risk that the company will be unable to meet its payment obligations.

The policy is designed to minimise volatility and negative consequences of unforeseen circumstances on financial results. Procedures and guidelines have been drawn up in accordance with the objectives formulated for this, which are derived from the strategic objectives, and are evaluated and (if required) adjusted at least once a year.

The Board of Management is responsible for risk management. In this context, it sets out procedures and guidelines and ensures compliance. The authorisations to commit Stedin Group are specified in the Governance & Authority Structure document. Mandates have also been drawn up for all business units to manage the above risks; for instance, for purchasing. The Board of Management and operational management regularly review the results, the ratios, the principal risks (or the concentration of certain risks) and the measures to manage them.

Scenarios are applied in the long-term financial plan. Operational and staff management reports to the Board of Management by means of an In-control statement twice a year.

The internal Investment Risk Committee is in charge of the formulation and application of the risk policy, and advises the Board of Management accordingly. The Supervisory Board exercises supervision over the course of business and risk management by conducting reviews as well as discussions of strategic plans, budgets, key performance indicators, forecasts and results.

The Treasury department is responsible for the active monitoring and management of capital, market risks, credit risks and liquidity risks of Stedin Group and handling the internal financing of wholly-owned subsidiaries. The control principles for this risk are laid down in the Treasury Charter, as adopted by the Board of Management. The Treasury Charter describes, among other things, the risk tolerance and the instruments available for managing risks.

The table below shows the correlation between the financial risks to which Stedin Group is exposed with regard to assets and liabilities, the instruments used to manage them and the applicable accounting:

Balance sheet item	Classification and measurement	Risks, the instruments used to manage them and classification and valuation applied			
		Foreign currency risk	Interest rate risk	Commodity price risk	Credit risk
Loans, trade receivables, contract assets and other receivables	Amortised cost	No material risk	No material risk	No material risk	Provision for expected credit losses
Interest-bearing and other liabilities	Amortised cost	Forward contract / Cross Currency SWAP Hedge accounting for changes in fair value	Interest rate swap Hedge accounting for changes in fair value	Not applicable	Not applicable
Trade and other liabilities	Amortised cost	No material risk	No material risk	The purchasing strategy for expected grid losses limits price fluctuations.	Not applicable

Paragraphs 33.1 to 33.4 discuss individual aspects of the table for each risk.

33.1. Market risk

Stedin Group has identified the following relevant market risks:

- Foreign currency risk: exposure to changes in value of financial instruments arising from changes in exchange rates.
- Interest rate risk: the exposure to changes in value in financial instruments arising from changes in market interest rates.
- Commodity price risk: the exposure to changes in value in financial instruments arising from changes in commodity prices. Stedin Group is faced with this type of risk mainly when purchasing for grid losses and is sensitive to the effect of market fluctuations in the prices of various energy commodities, such as electricity and green certificates. The commodity price risk is part of the financial long-term planning and is to date not hedged by means of derivative financial instruments.

The table below shows the fair value and the book value of the loans portfolio that is subject to market risks. Borrowings of € 2.2 billion are fixed rate (fair value risk). The other borrowings bear a variable interest rate which follows the development in market rates (cash flow/interest rate risk).

x € 1 million	Bookvalue as at 31 December 2019	Fair value as at 31 December 2019	Bookvalue as at 31 December 2018	Fair value as at 31 December 2018
Bond loans	1,796	1,846	1,293	1,288
Other loans	1,122	1,348	1,751	1,925
Total	**2,918**	**3,194**	**3,044**	**3,213**

The fair value of the bond loans was determined on the basis of the year-end closing rate. This value was measured in accordance with fair value level 1. The fair value of the other loans was determined using the present value method ('income approach'). This was based on the relevant market interest rates for comparable debt. Consequently, the information for establishing value is covered by fair value level 2. The table does not include the perpetual subordinated loan, as this item is classified as equity under IFRS; see note 23 Group equity for more details.

Foreign currency risk

Foreign currency risk within Stedin Group relates mainly to borrowings denominated in currencies other than the euro and to a lesser extent to purchasing and cash and cash equivalents. The foreign currency risks are risks in respect of future cash flows in foreign currencies and in respect of balance sheet positions in foreign currencies. To meet Stedin Group's financing requirements, loans were contracted in 2009 in non-euro currencies: US dollars (USD), Japanese yen (JPY) and pounds sterling (GBP).

Companies included in the consolidation are not permitted to maintain substantial positions in foreign currencies without the Treasury department's approval. Based upon the aggregate foreign currency position and the associated limit set for open positions, the Treasury department determines whether hedging is desirable and the strategy to be followed.

Cash flow hedges for foreign currency risks

At 31 December 2019, the foreign currency risks arising from these loans are hedged for the entire term using cross-currency interest swaps and FX forward contracts. The main nominal values and rates of the derivative financial instruments as at 31 December 2019 are as follows:

	Nominal cash flows less than one year x 1 million	Nominal cash flows more than one year x 1 million	Total nominal cash flows x 1 million	Average rate	Nominal value x € 1 million	Book value x € 1 million
Expected cash flows	USD 15	USD 251	USD 266	1.324	201	200
	GBP 6	GBP 104	GBP 110	0.851	129	88
	JPY 510	JPY 29,690	JPY 30,200	132.188	229	164
Total					**559**	**452**

Stedin applies cash flow hedging to these borrowings and derivative instruments and therefore the foreign currency exchange differences with regard to the borrowings and changes in fair value of the derivative financial instruments are taken in conjunction to the cash flow hedge reserve and any hedging ineffectiveness is taken in conjunction through the income statement. Further details of the hedging relationship are provided below:

			Changes in the cash flow hedge and the cost of hedging reserve comprise:		
x € 1 million	Derivative financial instrument	The hedged risk	Derivative financial instrument recognised in other comprehensive income	Balance of the cash flow hegde reserve	Reclassification recognised in the income statement
Expected cash flows	-26	-39	-26	-56	-
Total	**-26**	**-39**	**-26**	**-56**	**-**

The hedging relationships did not lead to hedge ineffectiveness in the reporting period. A breakdown of movements in the cash flow hedge reserve is provided in note 33.4 Derivative financial instruments and cash flow hedge reserve.

Interest rate risk

The interest rate risk policy is aimed at managing the net financing liabilities through fluctuations in market interest rates. A specified range for the proportions of loans at fixed and variable interest rates and a desired weighted average term of the debt portfolio serves as the base tool. Stedin Group can use derivative financial instruments to achieve the desired risk profile.

	2019	2018
Average interest rate	2.4%	2.9%

The average interest rate is calculated as the weighted average of the monthly interest expense in 2019. If all other variables remain constant, it is estimated that a general increase of 1 percentage point in Euribor (for a period of twelve months) would lead to a decrease in profit before tax of € 7.0 million (at 31 December 2018: € 5.0 million).

Cash flow hedge for interest rate risk

In anticipation of the issue of loans, Stedin Group entered into derivative financial instruments to hedge the interest rate risk during the term of the loan. The derivative financial instruments entered into for this were settled at the balance sheet date.

x € 1 milion	Balance of the cash flow hegde reserve	Reclassification recognised in the income statement
Cash flow hedge reserve for interest expense	15	1
Total	**15**	**1**

Fair value hedge

Stedin Group applies fair value hedges to convert part of its fixed-interest loans into variable-interest loans to achieve effective alignment with the strategic allocation between variable-interest and fixed-interest loans. The fair value hedging relationships for interest rate risks as at 31 December 2019 were as follows:

x € 1 million	Nominal cash flows less than one year	Nominal cash flows more than one year	Total nominal cash flows	Average rate	Nominal value	Book value
Expected cash flows	1	23	24	0.6%	400	413
Total					**400**	**413**

The table below shows details of the hedging relationship:

	Change in the fair value of:			
x € 1 million	Derivative financial instrument	The hedged risk	Derivative financial instrument recognised in other comprehensive income	Accumulated change in interest-bearing debt
Expected cash flows	13	13	-	13
Total	**13**	**13**	**-**	**13**

The hedging relationships did not lead to hedge ineffectiveness in the reporting period. A breakdown of movements in the cash flow hedge reserve is provided in note 33.4 Derivative financial instruments and cash flow hedge reserve.

Commodity price risk

Stedin Group is faced with this type of risk mainly in connection with purchasing for grid losses. Stedin Group is exposed to the effect of market fluctuations in prices of various energy commodities, such as electricity and green certificates. Stedin has purchase contracts that provide access to the energy market for the expected purchase volumes. Stedin applies a policy of frequent purchasing for grid losses in line with actual consumption, which reduces its sensitivity to price fluctuations and targets an average price level. The remaining commodity price risk is not hedged by derivative financial instruments.

33.2. Credit risk

The maximum credit risk is equal to the book value of the financial assets, including derivative financial instruments. Stedin Group's credit risk towards financial institutions mainly concerns cash and cash equivalents and derivative financial instruments for interest and currency hedging transactions. The Treasury policy takes account of limits for each counterparty and term in order to limit any concentration of credit risks and requires a minimum credit rating of A- equivalent Standard & Poor’s (S&P) and/or Moody’s and/or Fitch (for which purpose the lowest rating is decisive).

Credit risk for trade receivables and contract assets

The credit risk policy is designed not to provide customers with any credit going beyond normal supplier credit as set out in the applicable conditions of supply. Measures in place to limit debtor risk are:

- credit limits or bank guarantees for business customers;
- in principle, receivables must be paid within thirty days in accordance with standard conditions of supply;
- receivables for which payment is overdue are monitored and active dunning is applied;
- recourse to debt collection agencies and different collection methods for current and former customers.

The credit risk on trade receivables can be subclassified into mainly low-use (regulated) and high-use customers.

Since the introduction of the suppliers model, the credit risk relating to retail consumers is borne by the energy suppliers, where the concentration risk has consequently grown. A range of risk-mitigating measures have been implemented for this, including periodic monitoring and reporting of the risk profile of the energy suppliers. Individual signals for potential bad debts and credit ratings are used to value credit risk on energy suppliers.

The credit risk for high-use customers, other receivables and contract assets is limited as most receivables are limited in size and the concentration risk is also limited. For the assessment of risks in the various high-use portfolios, Stedin Group uses a simplified model that is based on Stedin's experience of receivables with the same risk profile, supplemented by expected developments of the debtors and the economic environment.

Trade receivables, amounts not yet invoiced and other receivables are as follows:

x € 1 million	As at 31 December 2019	As at 31 December 2018
Trade receivables	120	115
To be invoiced	44	37
Other receivables and accruals	8	3
Total	**172**	**155**

The breakdown of the outstanding trade receivables (including to be invoice, excluding other receivables and accruals) and bad debts provision by age is as follows:

x € 1 million	Expected loss %	2019 Receivables	2019 Provision / impairments	2018 Receivables	2018 Provision / impairments
Receivables from low-use customers	0.1% - 100%	75	1	70	1
		-	-	0	-
Receivables from high-use customers, other receivables and to be invoiced		-	-	0	-
Before maturity date	0.1% - 1%	66	1	58	1
After maturity date					
- under 3 months	1% - 25%	20	1	17	-
- 3 to 6 months	1% - 100%	3	-	1	-
- 6 to 12 months	5% - 100%	2	1	5	-
- over 12 months	65% - 100%	6	4	11	8
Face value		**172**	**8**	**162**	**10**
Less: provison / impairments		**-8**	**-**	-10	
Total		**164**	**-**	**152**	

In the bad debt provision an amount of € 3 million (2018: € 4 million) concerns trade receivables that have been provided in full. The table below presents the movements in the bad debts provision in detail:

x € 1 million	2019	2018
As at 1 January	**10**	**11**
Additions through income statement	1	2
Withdrawals	-3	-2
Reclassification to assets held for sale	-	-1
As at 31 December	**8**	**10**

33.3. Liquidity risk

Liquidity risk is the risk that Stedin Group is unable to obtain the required financial resources to meet its obligations in a timely manner. In that connection, Stedin Group regularly assesses expected cash flows over a period of several years. These cash flows include operating cash flows, dividends, interest payable and debt redemption, replacement investments and the consequences of changes in Stedin Group's creditworthiness. The aim is to have sufficient funds at all times to meet liquidity requirements. Great importance is attached to managing all the above risks to prevent Stedin Group from finding itself in a position in which it cannot meet its financial obligations. In addition, liquidity needs are planned on the basis of short-, medium- and long-term cash flow forecasts. The cash flow forecasts incorporate operating and investing cash flows, dividends, interest payable and debt repayments. The Treasury department compares this capital requirement against available funds.

Financing policy and available credit

The financing policy aims to develop and maintain an optimal financing structure, taking into account the current asset base, agreements, and principles regarding regulation and the investment programme. The criteria for the financing policy are access to the capital market as well as flexibility at acceptable financing terms and costs. Financing is contracted centrally and apportioned internally. Subsidiaries are financed by a combination of equity and intercompany loans.

In mid-2017, Stedin Group concluded a revised Revolving Credit Facility of € 600 million with six banks. The facility matures at the end of July 2024 and can be used for general operational purposes, working capital financing or debt refinancing. Stedin Group also has a € 750 million Euro Commercial Paper programme under which € 0 million had been issued at year-end (2018: € 0 million) and a € 3 billion Euro Medium Term Note programme under which € 1.8 billion had been issued at 31 December 2019 (2018: € 1.3 billion).

Liquidity risk arising from potential margin calls relating to foreign currency and interest rate management transactions is closely monitored. There are also procedures to ensure that appropriate thresholds and provisions are included in ISDAs and CSAs (Credit Support Annex). As in 2018, Stedin Group did not receive any margin calls in 2019.

Cash outflows

The table below shows forecast nominal cash outflows and any interest arising from financial instruments over the coming years. The cash flows from derivative financial instruments are based on the forecast net cash outflows (also see note 26 Interest-bearing debt for the terms).

As at 31 December 2019 x € 1 million	Within 1 year	1 to 5 years	After 5 years	Total
Interest-bearing debt	54	592	2,410	3,056
Derivative financial instruments	-	25	-38	-13
Trade and other liabilities	297	1	-	298
Total	**351**	**618**	**2,372**	**3,341**

As at 31 December 2018 x € 1 million	Within 1 year	1 to 5 years	After 5 years	Total
Interest-bearing debt	564	929	2,094	3,587
Derivative financial instruments	11	9	-53	-33
Trade and other liabilities	299	1	-	300
Total	**874**	**939**	**2,041**	**3,854**

Trade and other liabilities include, in 'contract liabilities', deferred income of € 23 million (2018: € 24 million).

33.4 Derivative financial instruments and cash flow hedge reserve

Derivative financial instruments

The derivative financial instruments are of a long-term nature. As in 2018, the derivative financial instruments are categorised as fair value level 2. The cash flow hedge instruments applied are derivative financial instruments that are subject to net settlement between parties.

Cash flow hedge reserve

Movements in the cash flow hedge reserve with regard to the hedges referred to above were as follows:

x € 1 million	Interest rate risk	Foreign currency risk	Total
As at 1 January 2018	**-**	**-65**	**-65**
Newly defined cash flow hedges in the financial year	-	-	**-**
Movement in fair value of cash flow hedges	-6	5	**-1**
Deferred tax liabilities	1	-4	**-3**
Reclassification cash flow hedge reserve to income statement	-	4	4
As at 31 December 2018	**-5**	**-60**	**-65**
Movement in fair value of cash flow hedges	-13	3	-10
Deferred tax liabilities	2	-1	1
Reclassification cash flow hedge reserve to income statement	1	2	3
		1	1
As at 31 December 2019	**-15**	**-55**	**-70**

The cash flow hedge reserve can be subclassified as follows by active hedging relationships and reserves for which the hedge has been discontinued, and the reserve will be reclassified to the income statement with the future cash flows:

x € 1 million	Active hedging relationships	Discontinued hedging relationships	Total
As at 1 January 2019	**-55**	**-10**	**-65**
Movement in fair value of cash flow hedges	-8	1	-7
Deferred tax liabilities	1	-	1
Change in corporate income tax rate	1	-	1
Reclassification of cash flow hedge reserve	11	-11	-
As at 31 December 2019	**-50**	**-20**	**-70**

Periods in which the cash flows from the cash flow hedges are expected to be realised:

x € 1 million	As at 31 December 2019	As at 31 December 2018
Expected cash flows		
Within 1 year	-	11
1 to 5 years	25	9
After 5 years	-38	-53
Total	**-13**	**-33**

The total cash flow hedges recognised in profit or loss in the future are recognised in the cash flow hedge reserve after deduction of taxes. Periods in which the cash flows from the cash flow hedges are expected to be realised:

x € 1 million	As at 31 December 2019	As at 31 December 2018
Expected recognition through the income statement after income tax		
Within 1 year	4	-6
1 to 5 years	20	-24
After 5 years	46	-35
Total	**70**	**-65**

34. Credit rating

A key pillar in Stedin Group's financial policy is to maintain good access to the available sources of financing, including the money and capital markets. It is important to that end that existing and potential capital providers have proper insight into Stedin Group's creditworthiness.

Stedin Holding N.V. and Stedin Netbeheer B.V. each have a credit rating with the rating agency Standard & Poor's (below: S&P). This rating consists of a long-term rating with outlook and a short-term rating. The outlook indicates the expected change in the long-term rating for the coming years.

The most recent rating awarded by S&P in July 2019 is A- with a stable outlook for the long term and A-2 for the short term. This rating is unchanged from 2018.

The most important ratio for Stedin Group is the ratio of Funds from Operations (below: FFO) to the net debt position for freely available cash and cash equivalents (Net debt), which is a customary ratio in the market for the sustainability of debt. S&P applies a multi-year average of this ratio as part of its assessment of the credit rating. Stedin Group presents this figure only at year-end 2019 and 2018.

The calculation of this ratio follows the figures in these financial statements, supplemented with the adjustments applied by S&P. These analytical adjustments are made in order to enhance the comparability of the figures as well as the financial position between Stedin Group and other businesses. The main adjustment concerns the perpetual subordinated bond loan as an instrument with a 50% equity component and a 50% debt component (by contrast to IFRS, where it is part of equity in its entirety). In addition, pension liabilitiesare included in the S&P definition of debt.

A change was made in the calculation method by S&P during 2019, while Stedin Group started applying IFRS 16 as from 1 January 2019. Before the change in the calculation method, the comparative figures for 2018 were adjusted, with the reported ratio changing from 12.2% to 11.7%. This difference is mainly due to temporarily higher tax paid in 2018. Due to the application of IFRS 16, as discussed in section 2.4 Effects of the adoption of new IFRS Standards, lease liabilities are recognised in non-current interest-bearing debt. The S&P adjustment for leases has therefore been eliminated and on balance has little effect on the ratio.

The calculation is set out in the table below:

x € 1 million	2019	2018
EBITDA*	489	509
-/- Interest paid	-70	-84
-/- Tax paid	-16	-54
-/- S&P adjustments**	-9	-9
+ S&P correcties - leases**	-	18
S&P - Funds from Operations	394	380
	-	-
Non-current interest-bearing debt	2,913	2,548
Current interest-bearing debt	5	496
Lease liabilities	87	-
-/- Cash and cash equivalents	-72	-169
IFRS - Net debt	2,933	2,875
+ S&P adjustments**	263	264
+ S&P adjustments - leases**	-	98
S&P - Net debt	3,196	3,237
	-	0
FFO / Net Debt – S&P adjusted	**12.3%**	**11.7%**

* Profit before income tax adjusted for depreciation, amortisation, net interest payable, profit of group entities sold, revaluations and share of minority interests.
** These adjustments are published by S&P on behalf of Stedin Group for 2018.

Current and non-current interest-bearing debt, interest paid and tax paid in accordance with these financial statements. Lease liabilities are part of non-current interest-bearing debt and are presented separately for comparative purposes.

The ratio FFO/Net Debt rose to 12.3% in 2019, from 11.7% in 2018. The increase in the FFO by € 14 million was largely driven by lower taxes paid, despite the lower operating profit (EBITDA). The net debt position (Net Debt) at year-end 2019 was € 42 million lower than in 2018 due to the application of IFRS 16 referred to above. Total interest-bearing loans outstanding decreased by € 126 million. The sales proceeds from Joulz Infradiensten B.V. and Joulz Meetbedrijf B.V. were used in order to repay existing loans as well as to finance the cash flow from regular business operations.

Tax paid in 2019 was € 37 million lower due to a refund in 2019 for prior years as well as temporarily higher payment of taxes in 2018. The lower operating profit of € 20 million was attributable to lower regulated rates for metering services as well as the sale of the business units Joulz Energy Solutions, Joulz Infradiensten B.V. and Joulz Meetbedrijf B.V. Revenue from metering services was consequently lower by € 33 million in total compared with 2018, while total regulated revenue was virtually unchanged from 2018. This reduction, which is a policy of Stedin and Enduris, is of a temporary nature with the aim of more closely aligning rates for customers with the actual costs of realising the roll-out of smart meters in the medium term.

S&P adjustments can be viewed in the S&P rating report of July 2019 (which is available via the Investor Relations website) on the basis of figures in the 2018 financial statements. For the most recent rating reports, see our website: http://www.stedingroep.nl/investor-relations.

35. Subsequent events

Coronavirus

At the time of publication of this 2019 Annual Report, the government has taken far-reaching measures in the fight against coronavirus. The energy infrastructure is vital to our society. In this situation, too, we are taking all necessary measures to ensure our electricity and gas grid remains as reliable as ever.

At the very least, coronavirus measures mean that office staff are working from home whenever possible, and that technicians are reducing customer contacts to essential interactions. This requires flexibility on the part of our planners, who are scheduling the work differently. Some investments are being postponed and some additional costs may have to be incurred.

It is not certain how long this situation will continue, and Stedin will keep responding vigilantly to what is being asked of us. We expect to have sufficient liquidity to be able to pay ongoing costs.

Stedin is preparing to return to the levels of activity from before the current measures in order to resume work on the energy transition.

Settlement of the sale of Joulz Diensten

At the beginning of 2020, the final sales price was settled of the commercial activities of Joulz Energy Solutions B.V. that have been sold to a group company of Royal VolkerWessels in 2018.

36. Notes to the consolidated cash flow statement

The consolidated cash flow statement has been prepared using the indirect method. To reconcile the movement in cash and cash equivalents, the result after income tax is adjusted for items in the income statement as well as for movements in the balance sheet that did not affect receipts and payments during the financial year 2019.

The cash flow statement distinguishes between cash flows from operating, investing and financing activities. Cash flow from operating activities includes interest and income tax payments as well as interest and dividend receipts. Development costs, investments in and disposals of non-current assets (including financial interests) are included in cash flow from investing activities. Dividends paid out are recognised as outgoing cash flow from financing activities.

The consolidated cash flow statement includes the cash flows for continuing operations and for discontinued operations.

Movements in working capital

Working capital consists of inventories and current receivables less trade and other liabilities. The table below shows movements in working capital recognised in the cash flow from operating activities:

x € 1 million	2019	2018
Movements in inventories	-	2
Movements in trade and other receivables	-12	-10
Movement in trade and other liabilities	-2	26
Total	**-14**	**18**

The movement in working capital does not include changes in respect of subsidiaries sold.

The sales result from the sale of Joulz, consists of the following elements:

x € 1 million	
Sale amount Joulz	313
Expenses paid sale Joulz	-3
Cash included in sale Joulz	-8
Net cash flow from sale of Joulz	**302**

37. List of subsidiaries

	2019 %	2018 %	City
Consolidated participating interest			
Stedin Netbeheer B.V.*	100.00	100.00	Rotterdam
Stedin Netten B.V.*	100.00	100.00	Rotterdam
N.V. Stedin Netten Noord-Holland*	100.00	100.00	Rotterdam
N.V. Stedin Noord-Oost Friesland*	100.00	100.00	Rotterdam
DNWG Groep N.V.*	100.00	100.00	Goes
DNWG Infra B.V.*	100.00	100.00	Goes
DNWG Warmte B.V.*	100.00	100.00	Goes
DNWG Staff B.V.*	100.00	100.00	Goes
Enduris B.V.*	100.00	100.00	Goes
NetVerder B.V.*/**	100.00	100.00	Rotterdam
Stedin Groep Personeels B.V.*	100.00	100.00	Rotterdam
Joulz Diensten B.V.	-	100.00	Rotterdam
Joulz Infradiensten B.V.	-	100.00	Rotterdam
Joulz Meetbedrijf B.V.	-	100.00	Rotterdam
Joint arrangements			
Utility Connect B.V.	40.72	40.72	Vianen
Tensz B.V.	50.00	50.00	Rotterdam
TeslaN B.V.	50.00	50.00	Goes
Infra Netwerkgroep Omexom VOF	50.00	50.00	Dordrecht
Associates			
Energie Data Services Nederland B.V.	21.16	21.16	Amersfoort
Zebra Gasnetwerk B.V.	33.33	33.33	Bergen op Zoom

* Stedin Holding N.V. has issued a declaration of joint and several liability (403 declaration) for these subsidiaries.

** On 1 May 2019, the name Joulz StoomNetwerken B.V. was changed to NetVerder B.V.

Company income statement

x € 1 million	Note	2019	2018
Total net revenue and other income	39	**4**	**-**
Cost of sales, contracted work and operational expenses		-1	-3
Depreciation, amortisation and impairment of non-current assets		-3	-1
Total operating expenses		**-4**	**-4**
Operating profit		**-**	**-4**
Financial income and expenses	44	-36	-44
Profit before income tax		**-36**	**-48**
Profit of participating interests	13, 41	346	165
		310	**117**
Income tax		15	1
Profit after income tax		**325**	**118**
Profit distribution:			
Profit after income tax attributable to holders of Stedin Holding N.V. perpetual subordinated bonds (after income tax)		12	12
Profit after income tax attributable to shareholders of Stedin Holding N.V.		313	106
Profit after income tax		**325**	**118**

Company balance sheet

Before profit appropriation

x € 1 million	Note	As at 31 December 2019	As at 31 December 2018
ASSETS			
Non-current assets			
Property, plant and equipment		59	10
Intangible assets	40	77	77
Financial assets	41	5,324	5,265
Total non-current assets		**5,460**	**5,352**
Current assets			
Receivables from group companies	42	579	566
Current tax assets		20	21
Accruals and other receivables		16	23
Cash and cash equivalents		53	110
Total current assets		**668**	**720**
TOTAL ASSETS		**6,128**	**6,072**
LIABILITIES			
Equity			
Share capital	23	497	497
Revaluation reserve	23	720	754
Cash flow hedge reserve	23	-70	-65
Cost of hedging reserve		-1	-1
Retained earnings	23	989	907
Undistributed profit for the year	23	313	106
Equity attributable to Stedin Holding N.V. shareholders		**2,448**	**2,198**
Perpetual subordinated bond loan	23	501	501
Total equity		**2,949**	**2,699**
Non-current liabilities			
Provisions		4	4
Deferred tax liabilities		42	30
Interest-bearing debt	26	2,913	2,548
Derivative financial instruments	19	52	56
Total non-current liabilities		**3,011**	**2,638**
Current liabilities			
Interest-bearing debt	26	5	496
Liabilities to group companies	42	122	192
Other liabilities	43	41	47
Total current liabilities		**168**	**735**
TOTAL LIABILITIES		**6,128**	**6,072**

Notes to the company financial statements

38. Accounting principles for financial reporting

The company financial statements have been prepared in accordance with the provisions of Part 9, Book 2 of the Dutch Civil Code and the same accounting policies have been applied as in the consolidated financial statements as permitted by Section 362(8), Part 9, Book 2 of the Dutch Civil Code. The descriptions of the activities and structure of the company as stated in the 'Notes to the consolidated financial statements' also apply to the company financial statements.

The company financial statements of Stedin Holding N.V. consist of the company income statement and the company balance sheet. The euro is the functional currency. All amounts are in millions of euros, unless stated otherwise.

Participating interests in group companies

Participating interests in group companies over whose commercial and financial policies significant influence is exercised are stated at net asset value, but not for an amount lower than nil. If the net asset value is negative, the participating interest is stated at nil. In this context, other long-term interests are taken into account which in effect must be qualified as part of the net investment in the participating interest. Where the company provides security for all or part of the debts of the participating interest concerned, or is in effect under an obligation (in proportion to its share) to enable the participating interest to pay its debts, a provision will be created. The amount of this reserve is determined with due regard for any bad debt provisions already deducted from the receivables concerned. A statutory reserve is formed for reserves of participating interests that are subject to restrictions on distributions.

Revaluation reserve

The legal entity maintains a revaluation reserve with respect to:

- increases in the value of assets, other than financial instruments, directly recognised in equity;
- increases in the value of assets where changes in value are taken to profit and loss, and for which no regular market prices exist;
- changes in the value of derivatives stated at fair value and subject to cash flow hedge accounting.

Deferred tax liabilities are deducted from the revaluation reserve in the event of differences between valuation for accounting and for tax reporting purposes. The realised part of the revaluation reserve is taken to the other reserves.

For the other accounting policies relating to equity, see note 2.2.21 Perpetual subordinated bond loan to the consolidated financial statements.

39. Net revenue and other income

Net revenue and other income relates to the accommodation costs for the premises at Nijverheidsweg, Utrecht as well as Keileweg, Rotterdam recharged to Stedin Netbeheer B.V.

40. Intangible assets

Intangible assets relates to the goodwill arising on the acquisition of DNWG. For more details, see note 15 Intangible assets to the consolidated financial statements.

41. Financial assets

x € 1 million	Subsidiaries	Receivables from subsidiaries	Other receivables	Derivative financial instruments	Total
Bookvalue as at 1 January 2018	**3,771**	**1,311**	**1**	**9**	**5,092**
Result of subsidiaries	165	-	-	-	**165**
Effect in corporate income tax changes	15	-	-	-	**15**
Disposals	-13	-	-	-	**-13**
Acquisitions	5	-	-	-	**5**
Movements in loans to subsidiaries	-	-4	-	-	**-4**
Movements in other loans	-	-	-1	-	**-1**
Movement in fair value of financial instruments	-	-	-	6	**6**
Bookvalue as at 31 December 2018	**3,943**	**1,307**	**-**	**15**	**5,265**
Result of subsidiaries	99	-	-	-	**99**
Effect in corporate income tax changes	-4	-	-	-	**-4**
Disposals	-59	-	-	-	**-59**
Movements in loans to subsidiaries	-	-1	-	-	**-1**
Movement in fair value of financial instruments	-	-	-	24	**24**
Bookvalue as at 31 December 2019	**3,979**	**1,306**	**-**	**39**	**5,324**

In both 2019 and 2018, no depreciation and impairments were applied to the non-current financial assets.

For an overview of all capital interests, see note 37 List of subsidiaries to the consolidated financial statements.

42. Receivables from and liabilities to group companies

Receivables from and liabilities to group companies are all short-term.

43. Other liabilities

Other liabilities can be specified as follows:

x € 1 million	As at 31 December 2019	As at 31 December 2018
VAT	17	20
Other	24	27
Total other liabilities	**41**	**47**

44. Financial income and expenses

The financial expenses relate mainly to the interest expense for external financing of Stedin Group. The financial expenses amount to € 69 million (2018: € 84 million) and the financial income to € 33 million (2018: € 40 million). The income concerns interest amounts recharged within the Group.

45. Contingent assets and liabilities

Fiscal unity
Stedin Holding N.V. forms a fiscal unity for corporate income tax purposes with all its consolidated participating interests as included in note 37 List of subsidiaries. The companies, including Stedin Holding N.V., that are part of a fiscal unity are jointly and severally liable for the tax obligations of that fiscal unity. There is also a fiscal unity for VAT purposes that includes Stedin Holding N.V. and all its consolidated participating interests as included in note 37 List of subsidiaries in the consolidated financial statements. Only companies, including Stedin Holding N.V., that are part of a fiscal unity are jointly and severally liable for the tax obligations of that fiscal unity.

Cash pool
Under its participation in the Stedin Group cash pool, Stedin Holding N.V., like the other participants, is jointly and severally liable for deficits in Stedin Group's cash pool.

Guarantees
Stedin Holding N.V. has issued group, performance and bank guarantees to third parties of € 27 million (2018: € 28 million). The full amount of € 27 million (2018: € 27 million) concerns 'parent company guarantees'.

Stedin Holding N.V. has taken out directors' and officers' liability insurance for the members of the Supervisory Board, the members of the Board of Management, directors and other executives within Stedin Group. To the extent possible, the directors are indemnified by Stedin Holding N.V., subject to specific conditions, against costs in connection with civil law, criminal law or administrative law proceedings in which they could be involved because of their position.

In addition to the contingent assets and liabilities for Stedin Holding N.V. above, see note 30 Contingent assets and liabilities in the consolidated financial statements for a comprehensive overview.

Liabilities statements of group companies
On behalf of the group companies included in the consolidation, Stedin Holding N.V. has issued a declaration of joint and several liability pursuant to Section 2:403 of the Dutch Civil Code. This declaration is included in the overview in note 37 List of subsidiaries. Pursuant to these liability statements, Stedin Holding N.V. is jointly and severally liable for all debts arising from legal acts performed by those group companies.

46. Subsequent events

Coronavirus
At the time of publication of this 2019 Annual Report, far-reaching measures are taken in the fight against coronavirus. The energy infrastructure is vital to our society. In this situation, too, we are taking all necessary measures to ensure our electricity and gas grid remains as reliable as ever.

At the very least, coronavirus measures mean that office staff are working from home whenever possible, and that technicians are reducing customer contacts to essential interactions. This requires flexibility on the part of our planners, who are scheduling the work differently. Some investments are being postponed and some additional costs may have to be incurred.

It is not certain how long this situation will continue, and Stedin will keep responding vigilantly to what is being asked of us. We expect to have sufficient liquidity to be able to pay ongoing costs.

Stedin is preparing to return to the levels of activity from before the current measures in order to resume work on the energy transition.

Settlement of the sale of Joulz Diensten

At the beginning of 2020, the final sales price was settled of the commercial activities of Joulz Energy Solutions B.V. that have been sold to a group company of Royal VolkerWessels in 2018.

47. Profit appropriation

Proposal for appropriation of profit for 2019

The articles of association of Stedin Holding N.V. contain provisions concerning profit appropriation. The articles of association state that 50% of the profit is eligible for dividend distributions in principle, excluding incidental income. Stedin Holding N.V. has designated the following income as incidental income:

x € 1 million	2019	2018
Profit after income tax	**325**	**118**
Result attributable to holders of Stedin Holding N.V. perpetual subordinated bonds	-12	-12
Incidental income:		
Change in corporate income tax rate	2	-14
Profit on disposal of Joulz Diensten	-251	-
Profit after income tax available for distribution to the shareholders	64	92
Proposed dividend	52	46
Increase of general reserve after proposed dividend distribution	**273**	**72**

A proposal will be put to the General Meeting of Shareholders to resolve to pay a dividend of € 52 million, being 50% of the profit excluding incidental income, plus a one-off amount of € 20 million and to add the remainder of € 273 million to the general reserve.

This would represent a total dividend for 2019 of € 10.46 per share (2018: € 9.18 per share). The proposed profit appropriation has not been recognised in the balance sheet as at 31 December 2019.

Rotterdam, 23 March 2020

Stedin Holding N.V.

Board of Management

Marc van der Linden, CEO (chair)
Danny Benima, CFO
Judith Koole, COO
David Peters, CTO

Supervisory Board

Doede Vierstra (chair)
Hanne Buis
Theo Eysink
Annie Krist
Dick van Well

Other information

Profit appropriation pursuant to the articles of association

According to the company's articles of association, the Board of Management may increase the reserves by an amount equal to at most half of the profit available for distribution, with the approval of the Supervisory Board. The remaining portion is at the disposal of the General Meeting of Shareholders. The General Meeting of Shareholders can decide to distribute all or part of the remaining portion. Undistributed profit is added to the reserves.

The articles of association also state that the General Meeting of Shareholders may decide to make interim distributions, subject to the provisions of the articles of association. There are no restrictions in the articles of association on the size of interim distributions, only the legal restrictions that apply to public limited liability companies. A decision to distribute an interim dividend from the profit for the current financial year can also be taken by the Board of Management, subject to the approval of the Supervisory Board.

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Independent auditor's report

To the shareholders and the Supervisory Board of Stedin Holding N.V.

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS 2019 INCLUDED IN THE ANNUAL REPORT

Our opinion

We have audited the accompanying financial statements 2019 of Stedin Holding N.V., based in Rotterdam. The financial statements include the consolidated financial statements and the company financial statements as included from page 114 to 188 in the annual report.

In our opinion:

- The accompanying consolidated financial statements give a true and fair view of the financial position of Stedin Holding N.V. as at 31 December 2019, and of its result and its cash flows for 2019 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS), with Part 9 of Book 2 of the Dutch Civil Code and with the provisions of and under the Public and Semi-public Sector Senior Officials (Standard Remuneration) Act ("Wet normering topinkomens" or "WNT").

- The accompanying company financial statements give a true and fair view of the financial position of Stedin Holding N.V. as at 31 December 2019, and of its result for 2019 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

1. The consolidated balance sheet as at 31 December 2019.

2. The following statements for 2019: the consolidated income statement, the consolidated statement of comprehensive income, the consolidated cash flow statement and the consolidated statement of changes in group equity.

3. The notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

1. The company balance sheet as at 31 December 2019.

2. The company income statement for 2019.

3. The notes comprising a summary of the accounting policies and other explanatory information.

Deloitte.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing and the Audit Protocol WNT ("het controleprotocol WNT"). Our responsibilities under those standards are further described in the "Our responsibilities for the audit of the financial statements" section of our report.

We are independent of Stedin Holding N.V. in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in The Netherlands. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

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

Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 15 million. The materiality is based on earnings before interest, taxes, depreciation and amortization as defined by Stedin Holding N.V. in disclosure note 26 of the annual report.

The audits of the components within the group have been performed with a materiality that is determined by the group audit team, varying from EUR 7.5 million to EUR 12.5 million.

Additionally, we have performed our procedures with respect to the WNT-information, as included in disclosure note 6.2, with the materiality requirements as included in the Audit Protocol WNT.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the Supervisory Board that misstatements in excess of EUR 0.75 million, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative or WNT grounds.

Scope of the group audit

Stedin Holding N.V. is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of Stedin Holding N.V.

Our group audit mainly focused on significant components. For Stedin Netbeheer B.V., Stedin Groep Personeels B.V. and Stedin Holding N.V. we have performed audit procedures. We have used other Deloitte auditors to audit component DNWG Groep N.V. Through this 98% of the consolidated revenue and 99% of the consolidated total assets have been audited.

For the audit of the DNWG Groep N.V. we have determined the work to be performed regarding the financial information. We have also determined the nature, timing and extent of our involvement in the work of the auditor of DNWG Groep N.V. We have sent audit instructions to the Deloitte auditor for the audit of DNWG Group N.V. and we have had several meetings with the management of DNWG Groep N.V. and the audit team during the planning-, interim and the year-end audit.

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Deloitte.

During these meetings the findings of the Deloitte auditor were discussed. We also assessed the performed procedures and audit file of the auditor of DNWG Group N.V.

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

Scope of fraud and non-compliance with laws and regulations

In accordance with Dutch auditing standards, we are responsible for obtaining a high, but not absolute, level of assurance that the financial statements as a whole are free from material misstatement, whether due to fraud or error.

We are not responsible for preventing non-compliance with all laws and regulations, nor should we be expected to identify all instances of non-compliance.

For fraud, the risk of not identifying a material misstatement is greater than error, since fraud may involve collusion, forgery, deliberate failure to record transactions, deliberate misrepresentation, or breaching internal control. Our audit procedures differ from those performed in a specific forensic investigation, the scope of which is often larger.

In identifying risks of material misstatement due to fraud or non-compliance with laws and regulations, we reviewed management's risk assessment and performed inquiry with management, those charged with governance and others within the group. Based on these procedures and the audit standards, we considered the risk of management override of controls as a presumed risk relevant to our audit.

Our audit procedures with regard to fraud risk are aimed at evaluating the internal controls that are relevant for mitigating these fraud risks. We also performed additional, substantive procedures, including a detailed analysis of the journal entries and supporting documentation regarding the post-closing corrections. Data analysis, including testing journal entries based on certain risk-oriented characteristics, is part of our audit approach to address the fraud risk.

Based on our industry experience and knowledge, discussions with management, and access to specific legal and regulatory compliance documents, we have assessed factors related to risks of non-compliance, of which can reasonably be expected to have a pervasive impact on the financial statements as a whole.

The possible influence of these laws and regulations on the financial statements varies considerably. First, the company is subject to laws and regulations that directly affect the financial statements, including corporate tax law, financial reporting regulations and requirements in accordance with Title 9 Book 2 of the Dutch Civil Code. We have assessed compliance with these laws and regulations in the context of our work on the financial statements.

Second, the group is subject to many other (industry-specific) laws and regulations, where the consequences of not complying with these laws can have a pervasive impact on amounts and/or disclosures in the financial statements, for example by imposing fines or filing a lawsuit. We have identified the Electricity Act 1998, the Gas Act, the Independent Network Management Act, the Energy Transition Progress Act, the General Data Protection Regulation and the Public Procurement Act 2012, which would most likely have such an impact.

In accordance with the auditing standards, we have performed certain audit procedures to address the risk of non-compliance with these laws and regulations.

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Deloitte.

We have made inquiries to this effect with management, those charged with governance and others within the group and have been given access to minutes of meeting of management and those charged with governance, correspondence with relevant authorities and letters of attorney. During the audit, we also remained alert to indications of (suspected) non-compliance, both at group level and at component level.

Lastly, we have received written statements that we have been informed of all known cases of (suspected) fraud or non-compliance with laws and regulations.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters audit 2019

Key Audit Matter	
Valuation of Goodwill and regulated assets	
Description	*How the Key Audit Matter was addressed in our audit*
The goodwill in the consolidated balance sheet amounts to EUR 77 million and is related to the acquisition of DNWG Groep N.V. in 2017. For the cash-generating units (CGU's) Stedin Netbeheer and DNWG, Stedin Holding N.V. conducts yearly goodwill impairment tests in line with EU-IFRS. Stedin has engaged an external valuation specialist to assist in performing these impairment tests. The regulated networks of Stedin Holding N.V. amount to EUR 6.7 billion. These assets are valued applying the revaluation model in IAS 16. The fair value of the regulated networks is periodically assessed at inception of a new regulatory period. Consequently, the headroom between the net realizable value and book value of the regulated networks is limited, therefore an increased risk of impairment of goodwill exists. In case triggering events exists that the fair value significantly differs from the book value, an adjustment to the revaluation will be recognised.	We have audited the management's impairment tests for the CGU's to which goodwill is allocated to assess whether goodwill might be subject to an impairment. This entails that we have assessed the design and implementation of internal controls related to these impairment tests. Subsequently, we evaluated management's analysis of impairment indicators with respect to the regulated networks. The outcome of this analysis is included in note 14 and 15 in the financial statements. With the assistance of our valuation experts, we evaluated the realizable value of the CGU's to which goodwill has been allocated and assessed the significant assumptions. Specifically, we evaluated the forecast of cash flows in the valuation model and the sensitivity of significant assumptions as included in note 15 in the financial statements. We have reconciled the forecast of future cash flows with authorised budgets and have taken note of the internal procedures and controls with respect to determining these budgets.

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Key Audit Matter	
Additionally, Stedin performs an annual analysis of the presence of impairment indicators based on IAS 36. The goodwill impairment test contains significant assumptions about amongst others: • Future investments and fair value as valuation principle for the regulated networks; • The market share and profitability of Stedin and DNWG, including their performance compared to other regional grid operators; • The weighted average cost of capital (WACC) of regulated networks as assessed by the Autoriteit Consument en Markt (ACM); • The discount rate; and; • The long-term growth rate. The assumptions are based on the regulatory methodology of the current regulatory period (2017–2021) and are also included in the analyses of the valuation of the regulated networks. Significant estimates will be influenced by, amongst others, future rates for network operators, the energy transition and the climate agreement, which can all entail far-reaching consequences. Based on the performed goodwill impairment tests, the Board of Directors has determined that the recoverable amount per CGU is higher than the carrying value as included in note 15 of the financial statements. The Board of Directors also established that there are no indicators for impairment of the regulated networks as disclosed in note 14.	Furthermore, we evaluated the competence and objectivity of management's external valuation expert. Furthermore, we specifically focused on the evaluation of the useful life of the gas networks. In the climate agreement is included that The Netherlands has to stop using natural gas as per 2050. Based on the existing laws and regulations in 2019, the regional grid operators are still obliged to maintain the gas network, except for new constructions that do not fall under the applicable exception, thus the regulatory useful life of the gas networks has not changed. Therefore, management has concluded that there is currently no reason to shorten the economic life of the gas networks and that this discussion will have to be resolved sector-wide in view of the enormous societal impact. Finally, we evaluated whether the disclosures in the financial statements are in accordance with the requirements of IAS 36, are sufficient and provide appropriate insight in the valuation of goodwill and regulated networks. *Observation* Based on the procedures performed we do not have findings to report on the financial statements.

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Key Audit Matter

Control Framework and reliability and continuity of automated data processing

Description	*How the Key Audit Matter was addressed in our audit*
In 2019, Stedin Holding N.V. worked on further identifying the risks and controls over financial reporting, resulting in a new control framework, as explained on page 96 of the report of the Board of Directors. The implementation of the control framework will be completed in 2020. We refer to the in-control statement on page 105 in the report of the Board of Directors in which the Stedin Board of Directors recognises the need for further improvements in the internal control systems. One element of the internal control within Stedin relates to automated data processing. The reliability of this is dependent on the effectiveness of IT controls. Various applications, databases and interfaces are used that are relevant to the primary processes and the preparation of the financial statements. For these reasons, key areas of focus in our work included change management, access security, and information security.	As part of our procedures, we have gained insight into internal controls to estimate the risks of material misstatement and to determine further audit procedures to address these risks. We have tested the effectiveness of the IT controls to the extent relevant within the scope of our audit of the financial statements. This work was performed by specialised IT auditors in our audit team. Our work consisted of evaluating developments in the IT infrastructure and subsequently testing the design, implementation and operating effectiveness of relevant IT controls. As the implementation of the control framework will be completed at a later date, we have only tested the manual controls, insofar as relevant within the scope of our audit of the financial statements, on design and implementation. Control deficiencies as noted were addressed by testing alternative controls or by performing specific substantive procedures. *Observation* Based on the audit procedures performed we do not have any findings to report on the financial statements.

Key Audit Matters audit 2018

As the implementation of IFRS 15 has been finalised in 2018 and as Joulz Diensten, including Joulz Meetbedrijf, is sold, revenue recognition is no longer considered a key audit matter in our audit.

Emphasis of the impact of the Coronavirus

The Coronavirus also impacts Stedin Holding N.V. Management disclosed the current impact and her plans to deal with these events or circumstances in page 181 of the financial statements. Management indicates that it is currently not possible for them to properly estimate the length and the impact of the Corona virus on the financial performance and health of Stedin Holding N.V. Our opinion is not modified in respect of this matter.

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COMPLIANCE WITH ANTICUMULATION CLAUSE WNT NOT AUDITED

In accordance with the Audit Protocol WNT 2019 we have not audited the anticumulation clause, as described in article 1.6a WNT and article 5, lid 1, sub j 'Uitvoeringsregeling WNT'.

This means that we have not audited whether or not there is a violation of standards by a senior officer due to any employment as a senior officer at other institutions subject to WNT, and whether the information required in this context is accurate and complete.

REPORT ON THE OTHER INFORMATION INCLUDED IN THE ANNUAL REPORT

In addition to the financial statements and our auditor's report thereon, the annual report contain other information that consists of:

- The Report of the Board of Management.
- The Report of the Supervisory Board.
- The other information.
- General information.

Based on the following procedures performed, we conclude that the other information:

- Is consistent with the financial statements and does not contain material misstatements.
- Contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

Management is responsible for the preparation of the other information, including the Report of the Board of Management in accordance with Part 9 of Book 2 of the Dutch Civil Code, and the other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Emphasis of the impact of the energy transition as explained in the report of the Board of Management

The Board of Management notes that because of the energy transition, Stedin Groep N.V. is facing future substantial investments that cannot be timely financed from the current expected growth in permitted income through the current rate regulation. For this reason, Stedin is investigating additional financing options related to the energy transition. We draw attention to the explanation on this matter in the report of the Board of Management on page 102.

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REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Engagement

We were engaged by the Supervisory Board as auditor of Stedin Holding N.V., as of the audit for the year 1997 and have operated as statutory auditor ever since that financial year.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

DESCRIPTION OF RESPONSIBILITIES REGARDING THE FINANCIAL STATEMENTS

Responsibilities of management and the Supervisory Board for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS, Part 9 of Book 2 of the Dutch Civil Code and the provisions of and under the WNT. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit assignment in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

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We have exercised professional judgement and have maintained professional scepticism throughout the audit, in accordance with Dutch Standards on Auditing, the Audit Protocol WNT, ethical requirements and independence requirements. Our audit included e.g.:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.

- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.

- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.

- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identified during our audit. In this respect we also submit an additional report to the audit committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Rotterdam, 23 March 2020

Deloitte Accountants B.V.

Signed on the original: J.P.M. Hopmans

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General information

Reporting policy

In this integrated 2019 Annual Report, Stedin Group renders account on its financial and non-financial performance and the value that the company creates for stakeholders in the short and long term.

Stedin Group reports half-yearly and yearly per calendar year; the most recent report was the Stedin Holding 2019 half-year report. This annual report of Stedin Group relates to the period 1 January 2019 to 31 December 2019. It consists of the Report of the Board of Management, the Report of the Supervisory Board (including the Remuneration Report) and the financial statements. The financial information of Stedin Holding N.V. for the full year 2019 and comparative figures for 2018 are presented and accounted for in the financial statements. The financial statements have been prepared in conformity with International Financial Reporting Standards (IFRS), as adopted by the EU. The Global Reporting Initiative (GRI) Standards are applicable to our non-financial performance, at comprehensive level. Stedin Group also complies with the EU Directive on disclosure of non-financial and diversity information as applicable to Public Interest Entities (PIE).

The financial information in this annual report has been consolidated for Stedin Holding N.V. and its subsidiaries. The subsidiaries Stedin, Joulz Diensten, and DNWG are consolidated in the non-financial information within Stedin Group. Discontinued operations are included for the period in which they were part of the group.

Stakeholder selection

By means of this report, we aim to inform a broad target group of stakeholders about our performance. We identify the following groups of stakeholders: customers, employees, shareholders, municipalities/local residents, investors/capital providers, suppliers and environmental organisations/NGOs. This selection is based on our analysis according to which they have the greatest influence on our strategy and business operations and at the same time experience the greatest impact from our activities and strategic choices.

Reporting standards

For its non-financial performance, Stedin Group applies the GRI Standards at the 'comprehensive' level and the guidelines of the <IR> Framework of the International Integrated Reporting Council. We aim to progress continually towards structuring our report as an integrated report that meets the requirements of the <IR> Framework and the GRI Standards.

The consolidated financial statements of Stedin Group have been prepared in conformity with IFRS as applicable at 31 December 2017 and as adopted by the European Union (EU), and the definitions of Part 9, Book 2 of the Dutch Civil Code. IFRS comprises both the IFRS standards and the International Accounting Standards issued by the International Accounting Standards Board (IASB) and the interpretations of IFRS and IAS standards by the IFRS Interpretations Committee (IFRIC) and the Standing Interpretations Committee (SIC) respectively.

In addition, Stedin Group complies with the regulations applying to Public Interest Entities, including the Audit Firms (Supervision) Act (Wet toezicht accountantsorganisaties, Wta). With effect from 2018, Stedin Group also voluntarily applies the Dutch Corporate Governance Code. Departures are explained.

Reporting process

The Board of Management is ultimately responsible for the integrated annual report and has delegated its preparation to a steering group. The Reporting project leader is responsible for the composition of the report. The responsibility regarding content is divided between the Strategy, Communication, Finance and Risk departments. The financial and non-financial strategic KPIs are an integral part of the planning and control cycle. The results are discussed in the regular business reviews. A responsible party is designated for each topic on the basis of an accountability index. The Board of Management reviews the final version before it is submitted to the Supervisory Board.

Selection of topics
Content selection is based on the strategy including strategic themes, risks and opportunities and key performance indicators (KPIs) as defined by the Board of Management. The contents of the annual report will be partly determined in the years ahead on the basis of the materiality analysis. The topics in the 2019 materiality matrix are based on interviews held with both internal and external stakeholders.

SDGs
Stedin Group reports on the United Nations' Sustainable Development Goals (SDGs, drawn up to make the world ‘a better place' by 2030) that are relevant to us. Stedin Group contributes to a limited extent to achieving those goals. We provide insight into this in the sections 'One Planet projects 2019 per impact area' and 'SDGs that impact Stedin (directly or indirectly)', with cross-references to the relevant disclosure in the annual report.

DNWG
We have aimed to disclose results at the Stedin Group level wherever possible in this report. Where it was not possible at year-end 2019 to present the DNWG results, the Stedin result only is reported. To the best of our knowledge, the reported data fairly present our performance.

Assurance of non-financial information
This financial year, no assurance was sought with regard to the reliability of the non-financial information. We may do so for the 2020 financial year.

GRI Index

We have adopted the GRI Standards guidelines in our sustainability reporting.

GRI Std.	GRI Indicators	Reference	Disclosure
	GENERAL DISCLOSURES		
102-1	Name of the organisation	About us: Stedin Group's activities / Terminology	
102-2	Primary brands, products and/or services	About us: Stedin Group's activities	
102-3	Location of headquarters	About us: Profile	Blaak 8, 3001 TA Rotterdam
102-4	Number of countries where the organisation operates (that are relevant to sustainable development)	About us: Profile	Stedin Group operates and is located in The Netherlands
102-5	Nature of ownership and legal form	Governance: Corporate Governance	
102-6	Major markets served (geographical distribution, sectors and types of customers)	About us: Stedin Group's activities	
102-7	Scale of the reporting organisations	About us: Key figures and key indicators for 2019	
102-8	Information on total number of employees	About us: Key figures and key indicators for 2019 About us: Stedin Group's activities	
401-1	Employee turnover	About us: Key figures and key indicators for 2019	
405-1	Diversity of governance bodies and employees	About us: Key figures and key indicators for 2019	
102-9	The organisation's value and supply chain	About us: Profile About us: Stedin Group's activities Strategy: Mission, vision and strategy Strategy: Value creation model	
102-10	Significant changes during the reporting period	About us: Stedin Group's activities / Non-regulatory activities / Review of the portfolio	
102-11	Information on application of the precautionary principle	Governance: Risk management	
102-12	Externally developed economic, environmental and social charters or principles to which the organisation subscribes	Results: 3. Sustainable business operations / Safety and security / Charters and principles Governance: Corporate Governance / Integrity	OESO guidance, UDHR, ILO
102-13	Memberships, alliances and associations	About us: Stedin Group's activities / Alliances and associations	
102-14	A statement from the Executive Board about the relevance of sustainability to Stedin and its strategy for addressing sustainability.	Transition together: Foreword Strategy: Developments within society and the energy market Results: 3. Sustainable business operations / One Planet Thinking / One Planet Governance	
102-15	Key impacts, risks, and opportunities	Strategy: Developments within society and the energy market Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Strategy: Sustainable development goals	

GRI Std.	GRI Indicators	Reference	Disclosure
EU3	Number of household, industrial en institutional customers	About us: Key figures and key indicators for 2019 / Stedin Group's key indicators	
EU4	Length of transmission and distribution networks per regulatory regime	About us: Key figures and key indicators for 2019 / Stedin Group's key indicators	
	Ethics and Integrity		
102-16	The organisation's values, principles, standards, and norms of behaviour	Goverance: Corporate Governance: Integrity: Code of conduct	
102-17	Procedure for advice about unethical or illegal practices	Governance: Corporate Governance / Integrity / Reporting Facility Governance: Corporate Governance / Integrity / Confidential advisers	
	Procedure for raising concerns about (suspected) unethical or illegal practices | whistleblower procedure	Governance: Corporate Governance / Integriteit / External report	House for Whistleblowers
	Governance		
102-18	Governance structure of those responsible for decision-making on economic, social and ecological (ESG) impact	Governance Report of the Supervisory Board	
102-19	Process for delegating authority for ESG topics	Governance: Corporate Governance: Governance roles Results: 3. Sustainable business operations / One Planet Thinking / One Planet Governance	
102-20	Responsibility for ESG topics at executive level and/or post holders reporting to highest governance body	Governance: Corporate Governance: Governance roles Results: 3. Sustainable business operations / One Planet Thinking / One Planet Governance	
102-21	Processes for consultation between stakeholders and the highest governance body on ESG topics	Governance: Corporate Governance: Governance roles Results: 3. Sustainable business operations / One Planet Thinking / One Planet Governance Strategy: Stakeholders and materiality	
102-22	Composition of the highest governance body	Governance: Corporate Governance: Biographical details of members of the Board of Management of Stedin Group	
102-23	Composition of the highest governance body	Governance: Corporate Governance: Biographical details of members of the Board of Management of Stedin Group Governance: Corporate Governance: Biographical details of members of the Supervisory Board	
102-24	Chair of the highest governance body	Governance: Corporate Governance / Governance roles Governance: Corporate Governance / Supervisory Board	
102-25	Process for the highest governance body for employees with integrity issues/ whistleblower procedure	Corporate Governance: Corporate Governance / Integrity	
102-26	Role in the development of mission, vision, strategy, policy and goals related to ESG impact	Strategy Results: 3. Sustainable business operations / One Planet Thinking / One Planet Governance Governance: Risk management / Riskgovernance	

GRI Std.	GRI Indicators	Reference	Disclosure
102-27	Actions taken to enhance knowledge of ESG topics	Strategy: Developments within society and the energy market Strategy: Value creation and impact measurement Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Strategy: Sustainable development goals	
102-28	Evaluating the highest governance body's ESG performance	Strategy: Developments within society and the energy market Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Governance: Risk management / Riskgovernance Results: 3. Sustainable business operations / One Planet Thinking Report of the Supervisory Board	
102-29	Role in identifying and managing ESG impacts, risks, and opportunities	Governance: Risk management	
102-30	Role in reviewing the effectiveness of risk management processes for ESG topics	Governance: Risk management	
102-31	Frequency of review of ESG impacts, risks and opportunities	Governance: Risk management	
102-32	The highest body that reviews and approves the sustainability report	Disclosure column	The Audit Committee of the Supervisory Board
102-33	Process for communicating critical concerns to the highest governance body	Governance: Corporate Governance / Integrity	
102-34	Number of critical concerns communicated and procedure for response of highest governance body	Governance: Corporate Governance / Integrity	
102-35	Remuneration policies for the highest governance body	Report of the Supervisory Board: Remuneration report for 2019	
102-36	Process for determining remuneration	Report of the Supervisory Board: Remuneration report for 2019	
102-37	Stakeholders' involvement in remuneration	Report of the Supervisory Board: Remuneration report for 2019	
102-38	Ratio of top salary - median salary	Report of the Supervisory Board: Remuneration report for 2019	
102-39	Ratio of the increase in top salary - average increase	Report of the Supervisory Board: Remuneration report for 2019	
205-1	Operations assessed for risks related to corruption	Goverance: Corporate Governance: Integrity	
205-2	Percentage of employees that receive training on anti-corruption policies	Goverance: Corporate Governance: Integrity	
205-3	Action in response to incidents of corruption	Goverance: Corporate Governance: Integrity	
206-1	Legal actions against unfair competition, cartels and monopolies	Goverance: Corporate Governance: Integrity	
102-40	A list of stakeholder groups engaged by the organisation	Strategy: Stakeholders and materiality Attachments: Reporting Policy / Stakeholder selection	

GRI Std.	GRI Indicators	Reference	Disclosure
102-41	Percentage of employees covered by collective labour agreements	About us: Key figures and key indicators for 2019	
102-42	The basis for identifying and selecting stakeholders	Transition together: Foreword	
102-43	Approach to and frequency of stakeholder engagement	Transition together: Foreword	
102-44	Results of stakeholder management	Strategy: Stakeholders and materiality	
102-45	Operational structure of associates	Financial statements: Notes to the consolidated financial statements	
102-46	Process for determining report content and implementation of GRI principles	Strategy: Stakeholders and materiality Strategy: Value creation model Attachments: Reporting Policy	
102-47	A list of all the material topics identified in the process for defining report content	Strategy: Stakeholders and materiality	
102-48	The effect of any restatements of information given in previous reports	Financial statements: Notes to the consolidated financial statements: Accounting and valuation policies: 2.3 Judgements, estimates and assumptions	
102-49	Significant changes from previous reporting periods	Financial statements: Notes to the consolidated financial statements: Accounting and valuation policies: 2.4 Change in presentation of the income statement	
102-50	Reporting period	Attachments: Reporting Policy	
102-51	Date of most recent report	Attachments: Reporting Policy	
102-52	Reporting cycle	Attachments: Reporting Policy	
102-53	Contact point for questions regarding the report or its contents	Colophon	
102-54	In accordance option	Attachments: Reporting Policy	
102-55	GRI content index	Attachments: GRI Index	
102-56	Policy with regard to external assurance	Governance: In control statement Other data: Control statement of the independent auditor Appendices: Reporting policy	
	SPECIFIC INFORMATION - SPECIFIC DISCLOSURES		
	Economic, financial performance		
103-1 103-2 103-3	Why is this topic relevant. Description and definition of material topics; (evaluation) management approach	Strategy: Developments within society and the energy market Strategy: Strategic risks and opportunities of the energy transition Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Results: 3. Sustainable business operations Report of the Supervisory Board	
201-1	Economic ratios (incl. accruals) 'for the community' in euros	Financial statements 2019	
201-2	Financial implications and other risks and opportunities for Stedin's activities due to climate change	Strategy Governance: Risk management	

GRI Std.	GRI Indicators	Reference	Disclosure
201-3	Coverage of the organisation's defined benefit plan obligations	Financial statements 2019	
	Investments in infrastructure		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
	Organisation's capacity to change		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
	Smart grids, data technology and innovation		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
	Reliability of energy supply, availability of grid		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
EU 28	Interruption frequency electricity	About us: Key figures and key indicators for 2018 / Stedin Group's key indicators	
EU 29	Average duration of interruption Annual average downtime	About us: Key figures and key indicators for 2018 / Stedin Group's key indicators	
	Heat transition (discontinue use of Groningen natural gas)		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Strategic risks and opportunities of the energy transition Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
	Security of supply		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
EU 28	Interruption frequency electricity	About us: Key figures and key indicators for 2019	
EU 29	Average duration of interruption Annual average downtime	About us: Key figures and key indicators for 2019	
	Data security, privacy and cybersecurity		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
418-1	Total number of substantiated complaints concerning breaches of customer privacy and losses of customer data	Strategy: Connectivity KPIs en targets	
	Customer satisfaction		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
EU3	Number of household, industrial en institutional customers	About us: Key figures and key indicators for 2019	

GRI Std.	GRI Indicators	Reference	Disclosure
	Stakeholder dialogue and environment		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
413-1	Degree of local community engagement in operations	Strategy: Developments within society and the energy market	
415-1	Financial or in-kind contributions to political parties, persons or institutions	Corporate Governance: Corporate Governance / Integrity	
	Reputation Stedin Group		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
307-1	Monetary value of fines or sanctions for non-compliance with environmental laws and regulations	Disclosure column	We expect to be able to present this information for 2020.
406-1	Number of incidents of discrimination and corrective actions taken	Governance: Corporate Governance / Integrity / Reporting Facility	
419-1	Monetary value of fines or sanctions for non-compliance with laws and/or regulations in the social and economic area	Disclosure column	We expect to be able to present this information for 2020.
	Sufficient and intellectual capital		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
	Training and development		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
404-1	Investments in training per employee per category	Results: 3. Sustainable business operations: Professionally competent employees now and in the future	
404-2	Programmes for skills management and lifelong learning that support the continued employability and facilitate career endings	Results: 3. Sustainable business operations: Professionally competent employees now and in the future	
404-3	Percentage of employees receiving regular performance and career development reviews	Results: 3. Sustainable business operations: Professionally competent employees now and in the future	
	Health and safety		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
403-1	Workers' representation with regard to health and safety policies	Results 3. Sustainable business operations: Safety and security	
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by gender and region	Results 3. Sustainable business operations: Safety and security	
403-3	Health and safety topics covered in formal agreements with trade unions	Results 3. Sustainable business operations: Safety and security	

GRI Std.	GRI Indicators	Reference	Disclosure
403-4	Health and safety topics covered in formal agreements with trade unions	Results 3. Sustainable business operations: Safety and security	
	Contributing to energy transition		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
301-1	Total weight or volume of materials used	Results: 3. Sustainable business operations: One Planet Thinking	
301-2	Percentage of input materials consisting of waste sourced externally	Results: 3. Sustainable business operations: One Planet Thinking	
302-1	Energy consumption inside the organisation	Results: 3. Sustainable business operations: One Planet Thinking	
302-2	Energy consumption outside of the organisation	Results: 3. Sustainable business operations: One Planet Thinking	
302-4	Reduction of energy consumption	Results: 3. Sustainable business operations: One Planet Thinking	
302-5	Reductions in energy requirements of products and services	Results: 3. Sustainable business operations: One Planet Thinking	
305-1	Direct (Scope 1) GHG emissions by weight	Results: 3. Sustainable business operations: One Planet Thinking	
305-2	Indirect (Scope 2) GHG emissions by weight	Results: 3. Sustainable business operations: One Planet Thinking	
305-3	Other indirect (Scope 3) GHG emissions by weight	Results: 3. Sustainable business operations: One Planet Thinking	
305-5	Reduction of GHG emissions	Results: 3. Sustainable business operations: One Planet Thinking	
305-6	Emissions of ozone-depleting substances	Disclosure column	Not applicable
305-7	NOx, SOx and other significant air emissions	Results: 3. Sustainable business operations: One Planet Thinking	
306-2	Total waste by type and disposal method	Results: 3. Sustainable business operations: One Planet Thinking	
306-4	Hazardous waste	Results: 3. Sustainable business operations: One Planet Thinking	
	Improving sustainability of purchasing activities		
103-1 103-2 103-3	Description and definition of material topics; (evaluation) management approach	Strategy: Stakeholders and materiality Strategy: Connectivity, KPIs and targets Attachments: Reporting policy	
308-1	Percentage of new suppliers screened using environmental criteria.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
414-1	Percentage of new suppliers that were screened using 'labour practices' criteria.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
407-1	Identified significant risks of non-freedom and actions taken.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
408-1	Identified significant risks of child labour and actions taken.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
409-1	Identified significant risks of forced or compulsory labour and actions taken.	Governance: Corporate Governance / Integrity Risk analyses supply chain	

GRI Std.	GRI Indicators	Reference	Disclosure
412-1	Issue and risk management in the supply chain with regard to human rights.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
414-1	Degree of screening of suppliers on human rights issues.	Governance: Corporate Governance / Integrity Risk analyses supply chain	
414-2	Negative impacts on human rights resulting from supply chain and actions taken.	Governance: Corporate Governance / Integrity Risk analyses supply chain	

Three-year overview

The amounts under Result, Balance sheet and Cash flow 2016 relate to the integrated energy company Eneco (Eneco Holding N.V.). The energy company split off in 2017 is presented separately under assets held for sale.

	Eenheid	2019	2018	2017
Income statement				
Revenue	€ mln	1,220	1,270	1,154
Total operating income	€ mln	1,234	1,286	1,194
Total operating expenses	€ mln	1,062	1,074	996
EBITDA	€ mln	489	509	471
Operating profit	€ mln	172	212	198
Profit after income tax	€ mln	325	118	423
Balans				
Property, plant and equipment	€ mln	6,753	6,406	6,140
Total assets	€ mln	7,289	6,991	6,551
Equity	€ mln	2,949	2,699	2,582
Total interest-bearing debt	€ mln	3,004	3,044	2,753
Investments in non-current assets	€ mln	646	607	494
Cash flows				
Cash flow from operating activities	€ mln	374	349	278
Cash flow from investing activities	€ mln	-236	-475	-1,317
Cash flow from financing activities	€ mln	-235	222	692
Creditworthiness				
Long-term rating (S&P)	rating	A-	A-	A-
Solvency*	%	44.9	43.3	43.3
FFO/Net debt position**	ratio	12.3	11.7	12.2
Shares at 31 December				
Number of shares outstanding (x 1,000)	aantal	4,971	4,971	4,971
Overig				
Electricity				
Active connections	aantal	2,302,475	2,285,701	2,278,394
Installed cables	km	1,034	806	611
Gas				
Active connections	aantal	2,120,671	2,114,935	2,119,249
Installed pipelines	km	221	250	210

	Eenheid	2019	2018	2017
Distributed volumes		-		
Electricity	GWh	19,957	21,330	21,893
Gas	mln m3	4,651	4,852	4,865
Other				
Average outage duration for electricity	minuten	20	17	16
Average outage duration for gas	seconden	87	69	40
Facilitated supplier switches	aantal	824	713	584

* Equity plus profit or loss for the period less expected dividend distributions for the current financial year divided by the balance sheet total, adjusted for the expected dividend distribution, connection contributions received and free cash and cash equivalents.

** This ratio is calculated in accordance with the Standard & Poor's (S&P) method. Funds From Operations (FFO) divided by net debt. FFO consists of EBITDA adjusted for lease expense, adjusted interest expense and tax expense. The net debt position is the sum of current and non-current interest-bearing debt, adjusted for off-balance liabilities, the hybrid loan and minus cash and cash equivalents. The ratio was calculated as at 31 December 2017. S&P applies a multi-year weighting to determine this ratio when assessing the credit rating.

The comparative figures of the FFO/Net Debt and Solvency ratios are not included given the limited comparability between the grid operator Stedin Holding N.V. in 2018 and 2017 on the one hand and Eneco Holding N.V. (including the energy company) in 2016 on the other.

Glossary

This section presents explanations of terms or abbreviations.

ACM
The Netherlands Authority for Consumers and Markets (ACM): an independent public regulator whose tasks include oversight of compliance with the Gas Act and the Electricity Act 1998.

A- rating
The rating score of a company, or 'rating', is an assessment of its creditworthiness in the form of a 'mark'. Ratings are awarded by specialised agencies.

CAIDI
Customer Average Interruption Duration Index: the average duration of an unforeseen interruption of electricity supply per customer affected.

CAPEX and OPEX
Capex are the Capital Expenditures, the costs related to developing and supplying our products and services. Opex are the Operating Expenditures, the operational costs to enable our business operations.

CDMA
Code Division Multiple Access is a telecommunications network for transmitting information across a wireless radio connection using spread spectrum techniques.

Congestion
Congestion is an overloading of the electricity grid. Congestion management is the reduction of capacity shortages in the electricity grid.

Corporate governance
Corporate governance concerns relations between the board of management, the supervisory board and the general meeting of shareholders. Good entrepreneurship (ethical and transparent conduct by the board of management) and effective supervision (including reporting on it) are key principles of corporate governance.

CGC
Corporate Governance Code. Good governance of a company protects the interests of shareholders, employees and other stakeholders. Rules of conduct for this are set out in the Corporate Governance Code. Listed companies are required to comply with this code by law. Stedin Group adheres to the CGC insofar as possible and applicable.

Commercial or non-regulated activities
The activities of Stedin Group which are subject to competition and which are offered at the customer's request.

ETPA
Energy Trading Platform Amsterdam, an independent energy trading platform.

FFO - Net debt position
Funds from Operations (FFO) comprises revenue minus costs, taxes and interest expense, adjusted on the basis of the S&P method. Net debt position is the total of current and non-current debt, including adjustments for the hybrid loan and pension liabilities, minus the total of (free) cash and cash equivalents at year-end. Both are calculated on the basis of the financial information of Stedin Group.

Flexibility
Smart matching of electricity supply and demand to avoid peak load.

FTE
Full-time equivalent. Equivalent of the number of employees in full-time employment.

Regulated market
The activities of the grid manager which arise from the tasks that are exclusively reserved for the grid manager and for which maximum rates are set by the ACM. They include:

- installing, maintaining, modernising and managing connections to the electricity grid with a rated capacity up to 10 MVA;
- building, maintaining, modernising and managing electricity as well as gas grids;
- transmitting gas and electricity;
- safeguarding the safety and reliability of the grids in an effective manner;
- promoting safety in using equipment and installations that consume electricity as well as gas;
- facilitating the free market to enable customers to switch to a different energy supplier.

GPRS
General Packet Radio Service. This technology is an addition to the GSM network and can be used to send and receive mobile data quickly and reliably.

GRI
Global Reporting Initiative. The internationally applied standards for sustainability reporting, in which an organisation reports publicly on its economic, environmental and social performance.

IFRS
International Financial Reporting Standards. Set of reporting rules issued by the IASB. Stedin Group complies with these reporting rules, which were drawn up to harmonise financial reporting at an international level.

<IR> Framework
Integrated reporting is an extensive framework for business and investment decisions that are long-term, inclusive and purpose-oriented.

LTI
Lost Time Injury. An LTI is an event that results in absence from work for more than one working day or shift; for instance, an accident in a workshop. Work carried out by and accidents of third parties are not included.

LTIR
Lost Time Injury Rate. Number of lost-time incidents per million hours worked.

Network losses
Network losses arise during the distribution of electricity. The greater the distance, the greater the loss. Network losses can also be caused by fraud and administrative losses (in the allocation and reconciliation process as well as the administrative process).

Net investments
Gross investments less customer construction contributions received from third parties.

NOC
Network Operations Center. Stedin's modernised control centre that monitors Stedin's service area 24/7.

PIE
A PIE is a Public Interest Entity. These are organisations that, due to their size or function in social and economic life, affect the interests of comparatively large groups.

OR
Works Council A body that consists of members of the works councils of the various business units of Stedin Group.

Regional Energy Strategy (RES)
Each region develops its own energy strategy in order to implement the measures for electricity and the built environment in the Climate Agreement. Examples are the regional generation of sustainable energy as well as plans to match supply and demand.

BoM
Board of Management. The board of management is the most senior executive body of an organisation. A board of management is responsible for the strategic management of the entity.

SB
Supervisory Board. The supervisory board in the Netherlands is the supervisory body of public limited liability companies and private limited liability companies.

RIF
Recordable Incident Frequency. The number of occupational accidents per 200,000 hours worked.

Remuneration report
The remuneration report is a report on the remuneration of the Board of Management and the Supervisory Board. The remuneration policy of Stedin Group is prepared by the Selection, Appointments and Remuneration Committee of the Supervisory Board.

SAIDI
System Average Interruption Duration Index. The annual average downtime: the average duration for which a customer is not supplied with electricity due to unforeseen interruptions (in minutes).

SAIFI
System Average Interruption Frequency Index. The interruption frequency: the average number of unforeseen interruptions with which customers are faced on an annual basis.

SDGs
Sustainable Development Goals. The Sustainable Development Goals are a set of goals for future international development. They have been formulated by the United Nations and are promoted as the global goals for sustainable development.

Smart meter
A smart meter enables the grid manager to read the meter for both electricity and gas from a distance, as well as the meter status information. The smart meter can also carry out instructions sent remotely, such as connecting or disconnecting a customer. Communication with the meter takes place via the cable network (Power Line Communication), via GPRS or via the CDMA network. The use of the smart meter should lead to energy savings.

Solvency
Equity plus profit or loss for the period less expected dividend distributions for the current financial year divided by the balance sheet total, adjusted for the expected dividend distribution, long term connection contributions received and free cash and cash equivalents.

Stakeholders
Stakeholders are individuals and groups that have an interest in a variety of ways in Stedin Group, such as employees, shareholders, customers, capital providers, suppliers, government and media.

VIAG
The Natural Gas Safety Instructions (VIAG) for energy companies, in conjunction with the annexes and operational safety instructions, provide a set of uniform rules for the safe operation of gas production systems of grid managers.

Disclaimer

This report may contain forward-looking statements and projections. These can be identified by words such as 'anticipate', 'intend', 'estimate', 'assume', 'expect' or the negative equivalents of these terms and similar terms. These forward-looking statements and projections are based on current expectations and assumptions concerning expected developments and other factors that can affect Stedin Group. These are not historical facts or guarantees of future results. Actual results and events can differ from the current expectations due to factors such as economic trends, technological developments, changes in laws and regulations, the behaviour of suppliers and customers, currency risks, tax developments, financial risks or political, economic and social conditions.

Further information on potential risks and uncertainties that can affect Stedin Group is stated in the documents filed by Stedin Group with Euronext Amsterdam and the Euro MTF Market of the Luxembourg Stock Exchange.

Except as required on the basis of laws and regulations, Stedin Group rejects any obligation or liability to revise or adjust projections and forecasts in this document on the basis of new information, future events or otherwise, or to publicly disclose such adjustments or revisions.

This annual report is published in Dutch and English language versions. In case of any discrepancy between both language versions, the Dutch version prevails. Certain parts of the annual report and the financial statements have been audited by our auditor.

The section entitled 'Independent auditor's report' describes which parts have been audited and reviewed, and how, by the independent auditor.

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Publication details

Published by
Stedin Holding N.V.
PO Box 49
3000 AA Rotterdam

The annual report is available online on our website: www.stedingroep.nl

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Illustrations
wijZE, Rotterdam

English translation
Metamorfose Vertalingen B.V., Utrecht

An English translation of this annual report will be available on www.stedingroep.nl. In the event of any discrepancy, the Dutch version will prevail.

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