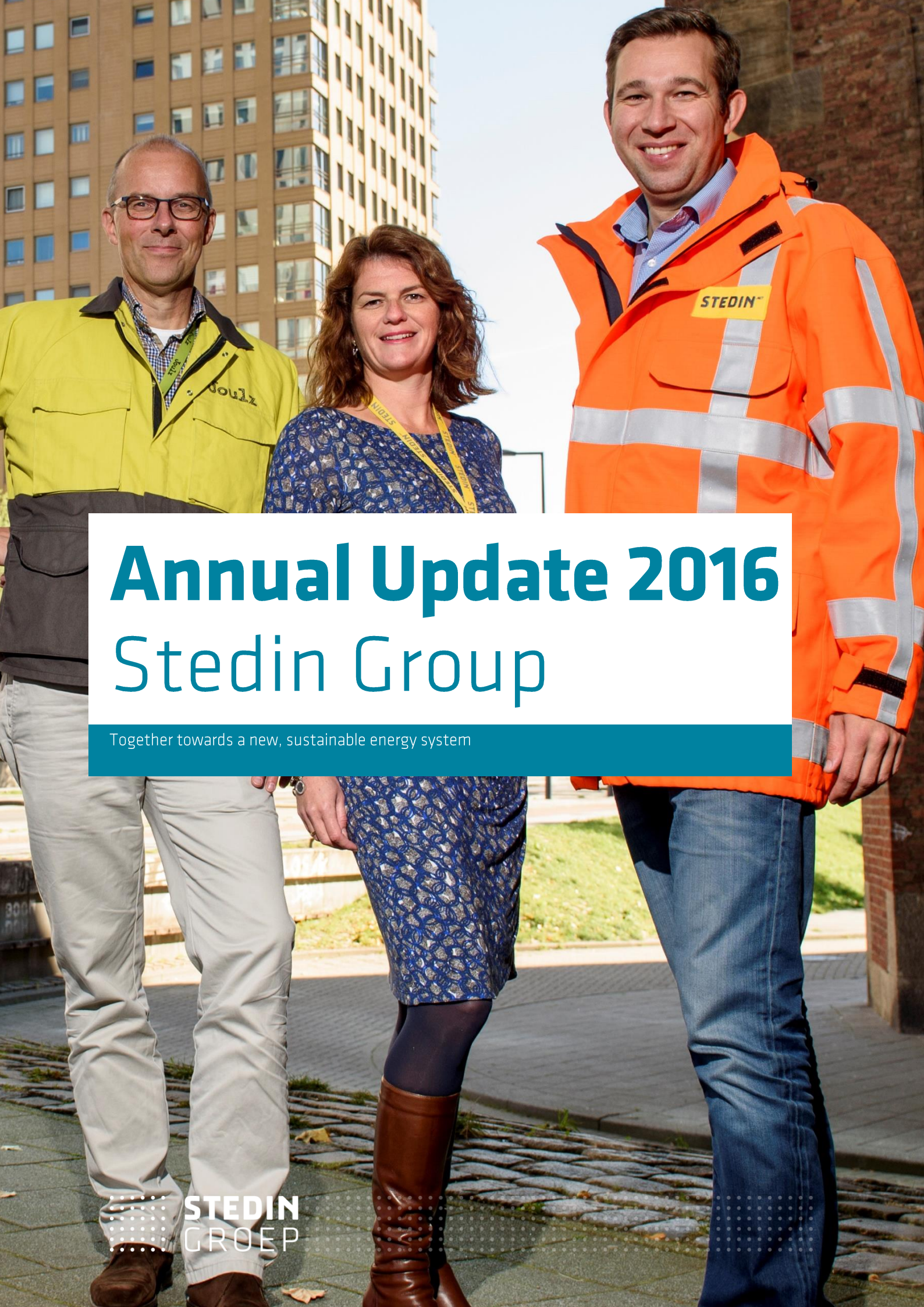


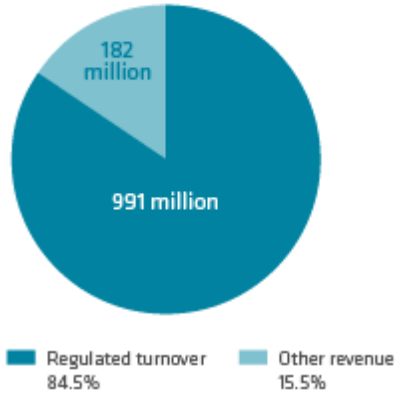
Annual Update 2016
Stedin Group

Together towards a new, sustainable energy system

STEDIN GROEP

Stedin Group Summary 2016

Stedin Group turnover 1.2 billion



Safety at Stedin Group

1.74

Lost Time Injury Rate (LTIR)

0.66

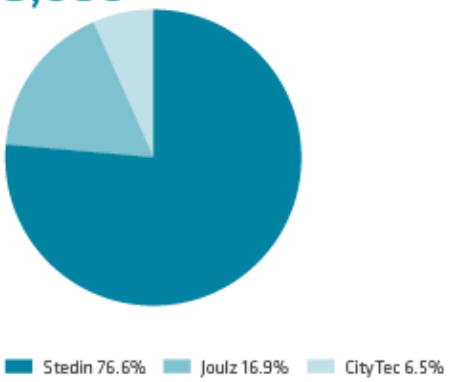
Recordable Incident Frequency (RIF)

Stedin Group employees

3,880

Stedin Group employees

3,880



Average downtime: electricity

17 minutes

Average downtime: gas

52 seconds

Stedin service area: electricity

Stedin service area: gas

Early in 2017, Stedin and Enexis concluded their negotiations on the sale of the gas and electricity grids in Weert.

Electricity connections

2,058,858

Gas connections

1,926,523

Cable length in km

45,253

(the Earth's circumference is approx. 40,000 km)

Gas pipeline length in km

23,576

(the Earth's circumference is approx. 40,000 km)

Amount of electricity transmitted

20,270 GWh

Amount of gas transported

4,565 million m³

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Introduction

‘It's a new dawn, it's a new day, it's a new life for me .... And I’m feeling good.’

These lyrics from the song ‘Feeling Good’, first recorded in 1965 and covered by many bands since then, reflect the start of a new era and a historic moment: the start of Stedin Group. This new group of enterprises was created due to the demerger of Eneco Holding N.V. The former business units of Stedin, Joulz and CityTec are now the prime components of this new Stedin Group, pursuing a shared mission of ‘Sustainable energy for everyone’. It is a mission that challenges us all to accelerate the energy transition. As the brand-new Executive Board, we started on 1 February 2017, and we’re ‘feeling good’ that we have been blessed with the opportunity to lead a powerful group of companies who are playing a key role in the energy transition.

The switch from fossil fuels to renewable energy sources to ensure a sustainable energy supply – the energy transition – will create a new energy system. The new system may vary significantly depending on local contexts and will involve contributions from all sorts of (new) players. We see growing support for a sustainable world, in society and in the political arena alike. We also see that people consider us the obvious party to talk to about that transition towards a sustainable world. The business units of Stedin Group are working in close collaboration with our extended network to make this energy system possible.

In this first annual report from Stedin Group, we present the ambitions and results of the business units that make up Stedin Group. These ambitions and results empower us and inspire confidence in the future.

‘We’re feeling good’

Rotterdam, 28 March 2017
Executive Board, Stedin Group

Marc van der Linden
Chief Executive Officer (CEO)

Judith Koole
Chief Operational Officer (COO)

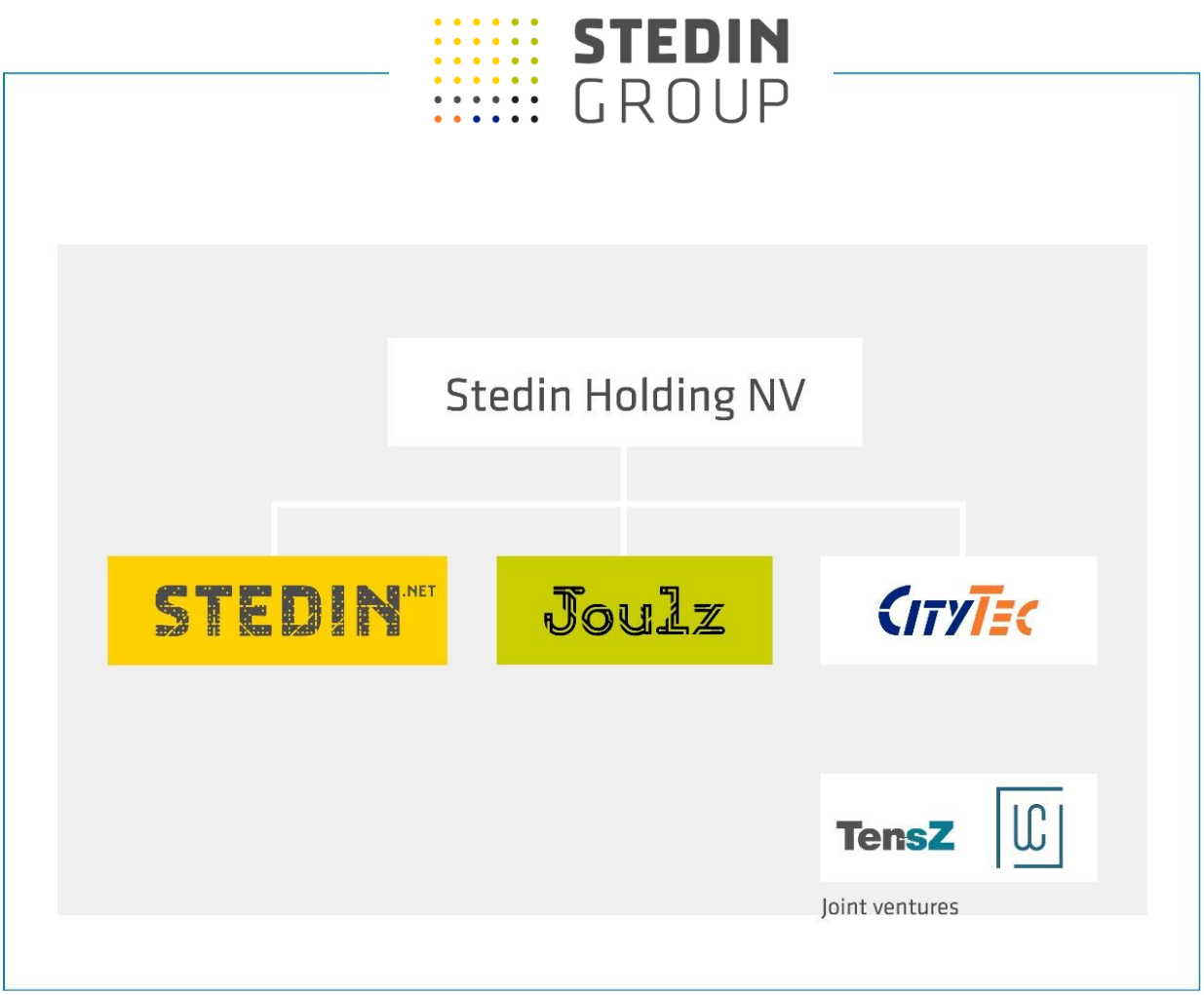
Gerard Vesseur
Chief Financial Officer (CFO)

About Stedin Group

Stedin Group consists of various business units, including Stedin, Joulz and CityTec, each using their knowledge and professionalism to ensure continuity in electricity and gas grids, energy installations and meters, as well as public lighting grids in the Stedin service area and beyond. Because we have all the expertise on-board, we are able to work effectively to build a future-proof energy system. Our mission: sustainable energy for everyone.

Profile

Organisation chart



The business units that make up Stedin Group

Stedin

As a grid operator, Stedin has the responsibility to provide a safe, reliable and affordable energy supply for their two million customers. They achieve this on the one hand by constructing and managing the electricity and gas grids and future-proofing them, and on the other hand by facilitating the energy market. At Stedin, over 3,500 employees (permanent staff and temporary workers) are working on the construction, maintenance, management and expansion of our energy grids.

Stedin operates in a regulated market, in conjunction with six other regional grid operators. Each regional grid operator has a monopoly in its own service area. Stedin is active in the provinces of South Holland and Utrecht and parts of the northeastern Friesland, North Holland and Weert regions. Regulation means that the tasks Stedin carries out have been laid down by law and that the rates Stedin is allowed to charge have been set by the Authority for Consumers and Markets (ACM). This regulatory model is intended to encourage grid operators to perform optimally (in terms of efficiency and quality) by providing a benchmark model. Stedin is independent and acts in a non-discriminatory manner. This means that Stedin has no prejudice to any other party relative to other parties.
www.stedin.net

Joulz

Joulz is active in the non-regulated market and provides various products and services to the business market in the fields of energy infrastructures and energy management:

- Construction and management of medium-voltage and high-voltage grids;
- Metering responsibility and energy management;
- Achieving alternative energy infrastructures, such as a steam network.

Customers include grid operators, energy generators, industrial consumers and small and medium enterprises. As of 1 February 2017, Stedin Meetbedrijf and Stedin Infradiensten have joined forces with Joulz Energy Solutions to form the Joulz brand. Joulz currently employs around 650 people.
www.joulz.nl

CityTec

CityTec is specialised in optimising outdoor areas in terms of public lighting, traffic control systems and parking systems. CityTec employs approximately 250 people who are responsible for the management and maintenance of 600,000 lighting columns, 30,000 traffic lights and 2,000 parking systems in the Netherlands. CityTec works in the non-regulated market for municipalities, the Directorate-General for Public Works and Water Management, provinces, water boards, port authorities, housing associations and private organisations with their own energy infrastructure, such as car parks and hospitals. www.citytec.nl

Joint ventures: Utility Connect & Tensz

Utility Connect is active in the field of reading measurement data from smart meters using a specially designed telecommunication network (CDMA), commissioned by Stedin and grid operator Liander. Tensz is the joint management organisation of TenneT and Stedin for assignments related to management and maintenance of middle-voltage and high-voltage grids and installations.

Key figures for Stedin Group

Stedin Group personnel	Unit	2016	2015
Number of staff at end of year	number	3,883	3,627
Number of FTE at end of year	number	3,788	3,548
Employee absence due to illness	%	5.54%	5.70%
Number of male employees	%	85.62%	85.54%
Number of female employees	%	14.38%	14.46%

Customer satisfaction	Unit	2016	2015
Stedin customer satisfaction (>7)	%	80%	78%
Joulz customer satisfaction[1]	Score out of 10	8	8
CityTec customer satisfaction[2]	Score out of 10	6.4	-
Footnotes: 1: Joulz Energy Solutions B.V. 2: There are no figures available for 2015.			

Safety and security at the Stedin Group	Unit	2016	2015
LTIR	Ratio	1.74	3.05
RIF	Ratio	0.66	0.97

Key figures for grid operations	Unit	2016	2015
Connections for large-scale electricity consumers	number	18,863	15,027
Connections for small-scale electricity consumers	number	2,039,995	2,025,178
Amount of electricity transmitted	GWh	20,270	20,013
Cable length in km	km	45,253	45,037
Installed cables	km	373	452
Connections for large-scale gas consumers	number	10,099	9,593
Connections for small-scale gas consumers	number	1,916,424	1,906,003
Amount of gas transported	millions of m^3	4,565	4,436
Pipeline length in km	km	23,576	23,508
Installed pipelines	km	150	207
Average outage duration for electricity	minutes	17	24.3
Faults in medium-voltage power with interruption	number	343	393
Average outage duration for gas	seconds	52	97

Strategy

Relevant trends

At the end of 2015, grid operator Stedin focused on the eleven key trends within the energy supply sector. These trends are important for the future and vision of the entire Stedin Group.

The energy supply is becoming increasingly sustainable

The percentage of renewable energy in electrical power generation is increasing steadily. An increasing number of households and companies have installed solar panels on the roof of their buildings. In addition, these past years saw a significant increase in wind energy, solar energy, energy from biomass and other renewable energy sources. The Energy Agreement for Sustainable Growth aims to achieve 6,000 MW on land in 2020 and 4,450 MW at sea in 2023. Energy production from renewables will also continue to grow after 2023.

The energy supply is becoming less centralised

Renewable energy is increasingly generated from many different sources, rather than a centralised system. For instance, applications of solar panels and biogas plants are excellent on a decentralised scale: in the built environment, in business parks and in the agricultural sector. The number of small-scale producers of renewable energy is rising sharply. This trend ties in with a more widespread movement in which social initiative is increasing again. Citizens and companies are taking on more active roles in the energy supply.

Hoog Dalem, all-electric district, Gorinchem

The variability of electricity production is increasing, accompanied by a vital need for flexibility

The next years will see the energy sector facing the challenge to keep the supply and demand of electricity balanced for 24 hours a day. The rise of renewable energy is largely due to variable sources, such as wind and solar energy. The presence of wind and clouds determines the available amount of solar and wind power at any given time. In order to balance that, it is necessary for our energy system to become more flexible. The demand for flexibility solutions will increase rapidly. The possibilities are already present. This includes storage systems, conversion of energy flows (for instance the conversion from electricity to heat), and influencing the energy demand by financial incentives.

System integration will continue to increase

Integrating the previously separated energy flows of gas, heat and electricity will achieve the flexibility needed to incorporate a large percentage of renewable energy into our energy system. For example, when there is a surplus of electricity, it could be converted into hydrogen (power-to-gas) or heat (power-to-heat) or can be used in making chemical products (power-to-products). On the other hand, biogas can e.g. be used in the production of electricity and heat. Hybrid energy systems and cross-pollinations are emerging.

An increased use of ICT in the energy system and the volume of data in this system
Matching supply and demand is an increasingly complex undertaking. Exchange, storage and conversion of energy flows require real-time information on supply, demand and prices at various moments in time. Therefore, in addition to the physical flow of electricity, there is a flow of information and communication: complex energy logistics driven by information technology. The application of sensors in the network and the major roll-out of the smart meter will provide new options to monitor the operation of the energy system. Ongoing and real-time data streams will increase exponentially as a result.

The pace of change is accelerating
The global economy continues to grow more volatile. New operators with new business models are entering the market. Consumer behaviour is changing drastically. Companies can experience huge exponential growth, but at the same time market leadership might only last for shorter and shorter periods. Companies may also crash and burn faster. What is also worth noting is that the time frame between the invention and the implementation of a market-ready product is also growing shorter, making it more important to respond and adapt quickly.

Customer demands are changing and will show more variation
Although a large group of customers seemed satisfied with standard products and services for years, the demand for tailor-made products and services is currently increasing. Customers are playing an increasingly active role in the energy supply, more frequently taking control of the process. A one-size-fits-all approach is no longer sufficient. With the increase in decentralised energy production, the end user's situation is also becoming more complex. Due to the multitude of options and the major differences in local choices, customer demands are also diverging.

The electrification of the energy supply pushes forward
Over the past decades, electricity has come to represent an increasing percentage of energy consumption. This trend is expected to continue at an accelerated pace, alongside the growing sustainability of the energy supply.

New players are entering the market
Up to a few years ago, the energy market was dominated by a limited number of integrated energy companies. By now, many new energy suppliers have entered the playing field, some with their own production capacity. Energy cooperatives unite under one umbrella corporation and are able to supply energy to all of their members. Car manufacturers do not just produce electric cars, but also construct rapid charging stations. In yet another situation, companies act as aggregators (aligning energy supply and demand) or provide services for energy savings in combination with the smart meter. Data is becoming an important source of innovation, bringing entirely new and unexpected players to the energy market.

Europe will be a stronger factor in defining energy policy
The electricity markets in central and northwestern Europe are becoming increasingly connected and an integrated electricity market is gradually taking shape in Europe. This trend towards integration is used as a model in the EU context for the preferred European electricity market. Europe plays a major rule in defining Dutch energy policy and the targets of the Energy Agreement. In recent years, coordination from the European Union regarding the energy policies of the European member states has been intensified.

Saving energy is becoming more important
Conserving energy by energy users is important to the success of the energy transition. An increasing interest in energy savings can be observed in society. The smart meter and the indicative energy label for households have made their contributions there. New homes, cars and electrical appliances are becoming more economical. Civil society organisations, homeowners' associations, construction companies, municipalities and energy companies are increasing their efforts to encourage energy savings. The market is responding by introducing products, tools and apps to help conserve energy.

Trends are continuing
In 2016, it was clear that the trends are continuing. For instance, on 4 October 2016 the Paris climate agreement was ratified by the European Parliament, which enables signatory countries to ratify on a national level. In 2016, the Netherlands published an ambitious energy agenda. The broad support for the energy transition seems to grow among public organisations. There is also considerable attention in the Netherlands and Europe for the topics of privacy and data leaks.

Strategy of the Stedin Group

Stedin Group was formally established on 1 February 2017, the date on which the former, integrated Eneco Group (or Eneco Holding N.V.) was split up. From this point on, there are two healthy companies: Eneco Group, containing business units that target e.g. production, wholesale and delivery of energy. And Stedin Group, a network company including Stedin, Joulz and CityTec, which has a clear focus on ensuring that the energy supply remains reliable and affordable and that the new energy system is achieved and facilitated.

Sustainable energy for everyone

Sustainable energy for everyone is our mission. This means that we consider it our responsibility to ensure that all of our customers have access to sustainable energy in order to live, work and do business. As a group, we aim to improve the sustainability of the energy system from the point of view of society and keep it unabatedly robust and affordable. All the business units of Stedin Group provide knowledge and activities to achieve this mission.

Strategic direction

In 2017 the new board will continue working on the group strategy that will serve as a guideline for all group entities. Obviously, the mission will be the heart of this strategy. The biggest unit in Stedin Group, grid operator Stedin, has a civic duty to pursue, a fact which also forms part of the direction and implementation of the Stedin Group strategy. This means that the public interest, the statutory tasks, the continued safety measures to ensure the independence of Stedin, and acceleration of the energy transition will be the most important drivers of the new group strategy.

With that perspective in mind, we currently see three key challenges:

1. How can we not only facilitate the sustainability of the built environment at a controlled pace, but also keep it affordable from a societal perspective?

2. What will that future energy system actually look like, involving unknown and new developments such as blockchain, the increasing volume of data and its relevance, and the increasingly blurred lines between producers, consumers and suppliers?

3. How can we increase the capacity for change in our organisation so we are able to continuously adapt to new developments?

As a group, we therefore want to reinforce the market facilitation task assigned to the grid operator by providing support to new developments aimed at accelerating energy transition and contributing to an affordable, reliable, accessible and sustainable energy system. Our focus here is on partnerships with existing and new players in our surroundings. Innovative players, developing new services to make optimum use of the energy system. These could include not only energy suppliers or aggregators, but also start-ups offering peer-to-peer solutions and innovations that are able to more effective align supply and sustainable demand, creating grid stability.

The eleven trends mentioned previously have taught us that the energy landscape is changing rapidly and that new developments are emerging one after another at an accelerating pace; the energy system is undergoing fundamental change. The consequences of these developments are not limited to grid operators, but also extend to energy/infra companies, such as Joulz. Other competencies, new knowledge, a manoeuvrable and resilient organisation, continuous and intensive collaboration with our surroundings; these are the key ingredients to achieve and facilitate the new energy system.

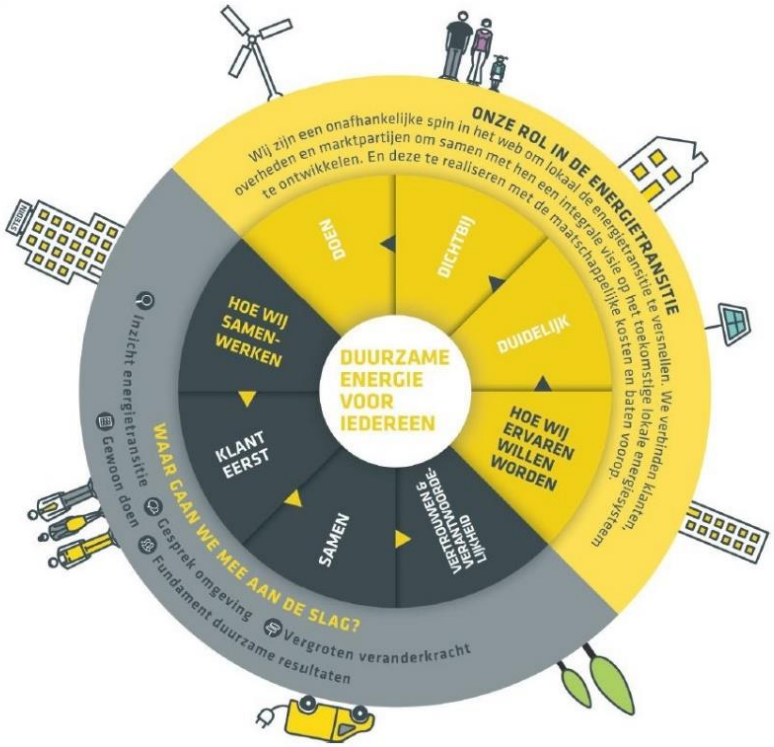
Matter of course
Reliable and affordable energy transmission is our raison d'être. It is obvious that we will have to have our processes and services in order in all of our endeavours and that we will deliver on our promises. We want to continuously improve on our performance. Financially sound operational management is yet another necessary precondition for investing in the energy transition. In making investment choices, we aim to achieve the lowest possible costs and highest possible gains for society – and we invite people to hold us accountable.

Stedin strategy

The core of the Stedin strategy is to help accelerate the energy transition on a local level as an independent hub operator. Stedin connects customers, government authorities and market parties to work together to develop an integral vision for the future local energy system, achieving that system based primarily on the costs and benefits to society. In the energy transition, Stedin is indispensable as grid operator in a unique, busy urban landscape with a complex energy infrastructure and a significant energy dependency. Energy should always be available, for this generation and for the generations to come.

Starting in 2016, we will pursue five strategic priority themes to live up to our ambition and mission of achieving 'Sustainable energy for everyone'. These are:

- **Achieving insight into the energy transition**: Stedin formulates an integral vision on the local energy system based on insights about the customer, the assets and the developments in politics and society.
- **Engage in a dialogue**: Stedin wants to work in close collaboration with customers, market parties and government authorities to develop choices, and will therefore engage in dialogue with all of these entities.
- **Just do it**: Stedin retains its purpose through continuous improvement. Our processes and services are in order, our customers are satisfied, and we are financially healthy.
- **Increase our power for change**: Stedin is manoeuvrable, because we quickly absorb new trends, developments, opportunities and threats and take appropriate action.
- **Continue to build the foundation for sustainable results**: Stedin provides its contribution by bolstering personal leadership and management.



Stedin strategic model (in Dutch)

Moving towards a new energy system together
At the start of 2016, Stedin launched its new strategy. It aims to provide handholds to all Stedin employees, but also the surrounding context, in an age that heralds the dawning of a new energy system. That strategy is focused on ensuring that the foundation of this new energy system, our grids, will be just as reliable and affordable for the new energy generation as it is now. Moreover, we aim to achieve that system based primarily on the costs and benefits to society. In order to make this possible, we have initiated dialogues with our surroundings and started an active search for partnerships. The energy transition is only possible together, in a joint effort.

We want to be clear about what will be necessary in that energy transition. That is why our customers and stakeholders have been introduced to a more outspoken Stedin. For instance, we have engaged in a social and political discussion in collaboration with the municipality of Utrecht to discontinue the requirement to connect newly built homes to the gas grid.

This new, more outspoken attitude of grid operator Stedin takes some getting used to, but we have noticed that our employees and customers are responding enthusiastically to our new course of action. This response is empowering. It may not always be the easiest of roads, but that does not deter us from taking it. After all, the energy transition is not a simple undertaking. Along with our efforts to explore our surroundings, discover and achieve the best possible ways to improve sustainability of the energy system and fulfil our social duties to the best of our abilities.

New course brings in award for strongest grid operator worldwide
In 2016, Stedin distilled its mission and strategy into an inspiring pay-off:

STEDIN.NET | FOR THE NEW **ENERGY** GENERATION

This new pay-off has been disseminated both within the company and beyond and has led to enthusiastic responses and an increased commitment to Stedin. In that context, a group of over forty employees from all ranks of the organisation have united under the flag of ambassadors: the Stedin Brand Builders. At the end of 2016, they started their activities; they will be initiating internal activities in 2017 to bring that strategy to fruition.

In September 2016, during the Energy Branding Conference in Reykjavik, Iceland, Stedin was declared world's best brand. Stedin was awarded this title in the category of 'energy transmitter and distributor'; the award was presented by the Icelandic Minister of Industry and Trade, Elin Ragnheidur Arnadottir.

Stedin was nominated together with Dutch grid operator TenneT, Fingrid from Finland, and Wellington Energy from New Zealand. A jury of energy experts, marketers and consultants debated and judged the participants and chose Stedin as the best brand. The jury reached this conclusion anonymously because of Stedin's clear position on the future, in which they see the customer as a partner in the energy transition. The jury had high praise for the conversion of that view into a strong brand, not just for their own organisation, but also for customers, partners and stakeholders.

Strategy on non-regulated activities

The Joulz and CityTec business units handle non-regulated infrastructure activities. This includes installation and maintenance of high-voltage grids, services in the field of installation responsibilities, and working on public lighting. They fulfil an important role for their customers in supporting them in that energy transition and by providing smarter and more sustainable solutions for their energy supply. Because they operate in different environments and work with a wide range of diverse technologies and innovations, they are able to apply new developments at the grid operator.

In 2016, what is now Joulz consisted of the entities Joulz Energy Solutions, the former Stedin Infradiensten and the former Stedin Meetbedrijf. As of 1 February 2017, these three business units will continue their activities under the name Joulz. The reason for this decision was that, by law, non-regulated activities are not allowed to be carried out under the name of the grid operator. In 2017 Joulz will be working on formulating a new, uniform strategy for the entire Joulz company.

CityTec evaluated its strategic direction in 2016, resulting in a redistribution of activities. For instance, Luminext, a company purchased in 2014 by CityTec, has been shifted over to Eneco. The operational activities on underground electricity grids for public lighting in the Stedin area have also been assigned to Stedin's Maintenance and Breakdowns department. CityTec in its current form, operating in a highly competitive market, targets e.g. services in the field of public lighting, traffic control systems and vehicle recharging stations.

Employees

We are able to deliver on our mission of achieving 'Sustainable energy for everyone' through the efforts and expertise of our employees. A strong commitment to our course is therefore very important for Stedin Group, and we invest heavily in that commitment. For instance, Stedin uses an active internal approach to our mission through what we call 'Internal Branding campaigns'. And we constantly engage in dialogue with our employees about their development and their contribution to the implementation of our mission, using a company program dedicated to 'real talk'. As a group, we are able to provide employees with options for development by e.g. gaining work experience at other business units.

By the end of 2016, 3,880 colleagues (permanent staff) were working at Stedin Group: 2,972 at Stedin, 254 at CityTec and 654 at Joulz.

Motivation and internal alignment

Stedin and Joulz do surveys several times a year to determine the extent to which employees are aware of the mission of achieving 'Sustainable energy for everyone' and show the appropriate behaviour to support that mission. We refer to this as internal alignment. Simultaneously, we also measure employee motivation. For the majority of 2016, CityTec was formally still a part of Eneco, which is why there is no separate information available regarding motivation and internal alignment.

Stedin

Compared to the reasonably low scores on internal alignment in 2015, 2016 shows considerable improvement. Stedin has succeeded in connecting the mission and the Stedin brand more emphatically, amongst others through the introduction of a new pay-off: 'Stedin. For the new energy generation'. There has been considerable internal communication about the mission and how to put it into practice. These efforts have proven successful, because the scores have gone up significantly. Employees currently not only know the mission, but also have a deeper understanding of how they can contribute to it. In 2017, the grid operator will be continuing this course: it is important that employees are aware of what they can contribute to 'sustainable energy for everyone'. There will be a continued focus on helping employees find ways to apply that in their day-to-day work.

Employee motivation was stable in 2016, hovering between 7.9 and 7.8. That is a nice score. Since we aim for constant improvement, we will be trying for a score of 8.0 in 2017.

Joulz

The average employee motivation of 7.9 for 2016 is an increase compared to 2015. It is just behind the target of 8.0. The score on internal alignment has decreased by about 5% in 2016. Factors that have played a role here include the insecurities concerning the demerger and the transition from an Eneco business unit to Stedin Group as a consequence of the split.

Really talk about it

The business units that together make up Stedin Group no longer follow the traditional assessment cycle. We have abandoned that approach; we believe that talking about performance, development and results twice a year is not sufficient to truly achieve performance improvement. For that to happen, people need to talk more often and to receive and give more feedback. We call that: 'Really talk about it'. We engage in dialogue using five simple questions: Are you doing the right things? Are you doing them the right way? Where are your strengths? Are you developing yourself sufficiently? Are you still where you need to be? Within the business units, we bring these questions to the attention of both managers and employees and announce them through internal communication channels.

It still is a learning process for both employees and managers to let go of the old format and to discuss these five questions more often. We are making progress, as our metrics show, but there is still plenty of room for improvement. We are convinced that this new methodology provides a much higher contribution to a manoeuvrable organisation and improved performance. That is why we are committed to this course in 2017.

Our culture

Every bit of change starts with yourself. If we all share and convey the same cultural values, we will understand each other and be better able to collaborate and genuinely focus on the customer. That is why all units of the Stedin Group share the same cultural values, using the slogan 'Really talk about it'. These values are important for our internal collaboration to succeed in our mission. Our internal cultural values are:

- **Customer first**
  We provide fast, excellent service, ensuring that customers genuinely feel helped every single time. We work on achieving better insights into our customers and their changing needs. Achieving better customer insights makes it possible to enhance and accelerate the development of innovative products and services with our customers, and on their behalf. That approach allows us to include our customers in the energy transition.

- **Together**
  We include everyone in our mission. At Stedin and beyond. We join forces with entrepreneurs and experts. Build strong relations and partnerships. We increase our knowledge and impact, while retaining our focus on the things we excel at. Customers do have a say in how we do things. We collaborate based on equality. We either do it together, or we don't do it at all.

- **Trust & responsibility**
  External leadership can only be achieved if we also show leadership internally. This means that all of us have to work on leadership. We trust each other's professional expertise and that colleagues do the right things in the right way. We make clear agreements on expected results and behaviour. Trust also means holding each other accountable for results and behaviour. Using dialogue to that end means we will be manoeuvrable and performance-driven.

Safety

In the changing energy world, safety remains an important component of the corporate culture and operational management at Stedin Group. We continue to improve our results in this area. However, since there is always room for improvement, this factor continues to receive considerable attention.

Ambition for safety awareness

In 2016, all managers maintained an undiminished focus on identifying and discussing safety risks by conducting physical tours and workplace inspections. Many managers have increased their knowledge and skills by attending safety training courses. This enabled them to engage in dialogue with operational staff in their workplace and continue to encourage safety awareness this way. The energy transition has changed part of our work. We are having to deal with new techniques. With all these changes in the next few years, the principle remains: if we are unable to work safely, we won't do it.

In order to increase safety awareness, Stedin Group has taken it upon itself to become a High Reliability Organisation (HRO) and reach level 4 on the Safety Ladder. To that end, Stedin Group launched a three-year safety program at the end of 2016. Its key objectives are preventing incidents, negative impacts on people or society, public blame and unsafe situations involving our customers.

A High Reliability Organisation (HRO) has five important characteristics:

1. Employees of an HRO organisation have a clear focus on failure and near-failure. People are always on the lookout for signals of weakness and they take those signals seriously.
2. Never simplify; this prevents oversimplified conclusions from determining how the situation is viewed.
3. Everyone is committed to the operational process. Everyone connects their thoughts and actions to the operational process and actually has knowledge of that process.
4. Staff members show resilience and persistence. People practice and study to prepare for situations which do not occur often, but are vital to achieving maximum performance.
5. People respect expertise. People who have intimate knowledge of the local situation and know the players and/or have the most expertise, receive maximum room to be able to respond swiftly and promptly to unexpected developments.

Occupational accidents

The objective for 2016 was the continued reduction of the total number of occupational accidents at Stedin Group (Stedin, Joulz and CityTec) to fewer than 32. Occupational accidents means all accidents with or without subsequent absence from work, requiring medical treatment or temporarily requiring alternative work activities. This objective has been more than achieved: in total we registered 19 occupational accidents. Expressed in RIF (RIF: Recordable Incident Frequency: the number of occupational accidents per 200,000 hours worked) this means 0.66. The RIF target was 1.1 at most. It is worth noting that we consider all accidents one too many, and that we will continue to commit to reducing occupational accidents.

In addition, we wanted to reduce the number of occupational accidents involving subsequent absence (Lost Time Injury, LTI) within Stedin Group to a maximum of 13. That objective has also been reached; the number of occupational accidents with absence from work has been decreased to 10 in 2016 (2015: 25). The ultimate goal is to reduce this number to 0.
The number of occupational accidents with absence from work per million hours worked (Lost Time Injury Rate, LTIR) has reached 1.74 based on this.

Despite all endeavours, such as workplace inspections and structural dialogues in which safety aspects have been discussed, the number of occupational accidents involving our contractors went up this year. These accidents have been analysed and the actions ensuing from that analysis have been included in the Action Plan 2017 to continue reducing these risks.

Risks

Considerable attention has been paid to updating risk identification and evaluation (RI&E) practices. After identifying possible risks, risk control measures were determined in the field of health, safety and the environment. It is also important to report unsafe or undesirable situations in good time. Because the number of reported incidents has been somewhat lower than expected, we will continue to focus on encouraging people to report incidents. The speed of handling these reports has continued to improve this year. In 2017, we will not just manage based on the timely reports and handling of incidents, but also on content and quality of the handling.

Challenges

The energy landscape is constantly changing due to increased sustainability, the energy transition, electrification and innovations. Conventional energy sources are diminishing, while other energy sources such as wind and solar energy are flourishing. This has major consequences for the energy infrastructure. Controlling the safety aspects for existing and new sites will present a significant challenge in the future for all Stedin Group business units. Identifying risks and taking timely measures will permanently remain important to reduce the number of occupational accidents in the years to come.

Joulz: Safety Ladder level 3

Since 1 July 2016 Joulz has been certified for Safety Ladder level 3, a key certification for companies such as Joulz who implement infra assignments as contractor. Joulz is only the second energy infrastructure company in the Netherlands that has attained this certification at level 3 for the entire organisation. Joulz has traditionally prioritised safety as well as product and process quality. In all stages of projects, from design to construction and maintenance, Joulz has a clear focus on continuous improvement of safety for employees and the surrounding area. By achieving Safety Ladder level 3, Joulz has taken yet another important step in developing safety awareness in its employees.

Energy fraud

Illegal cannabis cultivation usually goes hand in hand with energy fraud. This is a serious problem. Energy theft results in damages running up to €200 million per year in the Netherlands, losses that are borne by society. Cannabis growers often also use unprofessional energy connections and unsafe wiring. This leads to a serious risk of short circuits and fire: one in five fires at houses and businesses are the result of tampering with electricity. These situations present dire peril to the grower, the person living in the house, or the surrounding neighbours. Criminals are becoming increasingly resourceful at hiding cannabis farms. If they mask the ventilation, for instance, these farms are hard to find using thermal imaging cameras.

In 2015, Stedin discovered that the location of illegal cannabis farms can be detected by using smart software. This technique was also applied in 2016. In addition, Stedin continues to work together with municipalities, police and the Public Prosecutor's Office. A cannabis farm can be reported to the police at Crime Anonymous (phone number 0800-7000) or to Stedin.

In 2016, 1193 cannabis growers were discovered in the greater Randstad area, 12% less than in 2015. An additional 10% cases of energy theft have been discovered, without being related to a cannabis farm.

Our customers

Customers of today and tomorrow: they are what it is all about for us. We continue to get a more accurate overview of customer preferences, which leads to better control on customer satisfaction. By measuring how our customers feel about our services and products, we can continue to improve them. And we are prepared for future customer preferences.

Focus on the customer

Stedin customer satisfaction

80% of all customers gave us a score of 7 or higher

The target for 2016 was to have over 79% of our customers give Stedin services a score of 7 or higher. In the end, 80% of our customers have given Stedin a score of 7 or higher. In case of the Customer Contact Centre and the Complaint Management department, customer satisfaction has increased in comparison to the year before. Customer satisfaction in relation to the installation and modification of smaller and larger connections will continue to be a focus point in 2015.

In 2016, the following improvements have been mentioned and implemented:

- **Direct feedback as new measurement methodology**
  We have chosen a new methodology for the customer satisfaction survey. Stedin is currently asking its customers for feedback within one day. This gives employees immediate insights into how the customer perceive the level of service and will make it possible to respond more quickly to developments.

- **We map customer preferences and perceptions**
  Stedin took the feedback from the survey and converted it into customer journeys. The customer journey is a visual representation of all the contact moments a customer has with Stedin. This method is used to map out customer preferences and perceptions. Based on this information, Stedin has developed improvement initiatives to take its services and customer satisfaction to a higher level.

In 2017, Stedin wants to aim higher. Instead of aiming for a 7, we will be aiming for an 8 or higher in 2017. This is closer to our ambition to have a clear focus on the customer.

Joulz customer satisfaction

Joulz customers have given the Joulz services an average score of 8 out of 10. We are quite pleased with that score. The Meter Services continue to score high in the customer satisfaction surveys. Customers have indicated that they always want quick and expert assistance in the event of a fault or breakdown. The aspects that are valued the most by our customers:

- complying with safety regulations;
- quality of the finished work;
- the professional expertise of our employees;
- the availability of our employees;
- the quick response to customer questions.

Joulz expects that the implementation of a process-driven working method will maintain customer satisfaction or even increase it. Due to this new working method, the organisation is set up in such a way that a fast and adequate response can be offered in line with customer preferences and needs.

CityTec customer satisfaction

In September 2016, CityTec launched a new customer satisfaction survey. The first survey showed that customers have given CityTec an average score of 6.4. The survey revealed major differences; CityTec received very positive and less positive scores on the same aspects. We suspect that regional differences might be the cause of that. CityTec region managers will continue to focus on this aspect in 2017, ensuring that CityTec will be able to improve services to its customers.

Reducing the risk of customer data use in databases

In October 2016, on behalf of all grid operators, including Stedin, Netbeheer Nederland submitted an action plan for 'Risk reduction of database use' to the ACM (Authority for Consumers and Markets) and Personal Data Authority. In this plan, grid operators work in close consultation with market parties to state how they want to reduce the risk of unlawful use of customer data from their central database. The joint grid operators have also intensified their monitoring of this database. They are currently monitoring on a daily basis to see if any conspicuous queries have occurred. The risk of data leaks is reduced by these measures and the monitoring of database use by market parties will be intensified.

Reliable transmission of gas and electricity

Stedin aims to achieve constant availability of electricity and gas for its customers. And when interruptions occur in the energy supply, they need to be resolved quickly. That is why Stedin is constantly working to reduce the number of interruption minutes and prevent interruptions in the energy supply.

Outage duration for electricity and gas

The outage duration forecast for electricity is 17 minutes in 2016 (16.98). This is a further improvement on the positive results in 2015 (24.3 minutes). The 2016 outage duration for gas is 52 seconds. That is 8 seconds better than the stated target.

Reducing the number of interruption minutes

In 2016, Stedin launched various initiatives to reduce the average interruption duration per fault and breakdown. Internal processes and working methods have been improved, as well as the data quality of operational resources. The number of intelligent disruption detectors in the grids has also been increased. And 2016 also marked the completion of the Distribution Management System implementation. This system is the foundation for the operational management of the entire medium-voltage grid of the grid operator and provides real-time insights into the status of the (self-repairing) medium-voltage grids.

Rapid on-site response is also a crucial factor in limiting the outage duration. In 2016, Stedin improved its planning and managing processes. This has shortened the period between noting a fault or breakdown reported by the customer and the arrival of the technician on-site. Stedin observed that this also contributed to increased customer satisfaction regarding resolution of faults and breakdowns.

In addition, in 2016 Stedin started analysing processes regarding faults, breakdowns and assets, such as stations, cables and lines. These analyses contribute to the quickest way of clearing faults and breakdowns and preventing them from occurring.

Avoiding faults and breakdowns by preventing excavation damage

Efforts to prevent excavation damage have continued to professionalise in 2016. The use of ICT and data support has increased the reliability of information in the KLIC reports (mandatory reports of mechanical excavation activities). There is also a clearer overview of where and when excavation activities will take place in the vicinity of grids. Using the risk analysis matrix makes it possible to prioritise KLIC reports, so Stedin will be able to take timely action to minimise potentially huge risks. All of this resulted in a substantial reduction of the number of faults and breakdowns in the medium-voltage grid caused by excavation damage.

Safety of the gas grid

At the beginning of 2016, the script for handling a gas-related fault or breakdown report, what we call the intake, was rewritten. This modification was the result of an accident at another grid operator, which warranted improving the intake and increasing safety as a result. This modified script has been shared at a national level and implemented by all grid operators.

Upgrading the energy infrastructure

A key responsibility of the grid operator is to ensure a reliable and affordable electricity and gas grid. In order to guarantee this and to future-proof the grid, Stedin constantly invests in upgrading its grids. The investments increased in 2016 compared to the preceding year and amounted to €402.2 million (2015: €360 million). For instance, Stedin invested in upgrading stations and grids to make them suitable for redelivery of electricity.

Upgrading electricity grids in Dordrecht

Until the end of 2017, Stedin will be installing new electricity grids in Dordrecht and Zwijndrecht, traditionally an important hub for energy transmission. These new grids increase the reliability of the energy grid. More capacity on the electricity grid will also be made available for customers who want to redeliver their self-generated electricity.

The construction of three new high-voltage lines and a new distribution station on Oranjelaan in Dordrecht requires an investment of 31 million euros. The new 50/13 kV electricity station at Oranjelaan distributes power to residential areas, industrial areas, public buildings and offices. The new compact station has been equipped with the latest technologies and will replace three older stations in one fell swoop. Stedin has also started the installation of two new cables with a voltage of 50 kV running underneath Wantij in Dordrecht, in between the high-voltage stations at Merwedehaven and Oranjelaan.

Alderman Rinette Reynvaan (Dordrecht) and Stedin's Koen Verbogt (left) will officially open the new Stedin distribution station on Oranjelaan

A new electricity distribution station in Klaaswaal

In Klaaswaal in the municipality of Cromstrijen, Stedin is constructing a new 50/13 kV electricity distribution station. The installations that used to be outside will be placed inside at this location. That is not just more pleasing to the eye, but also easier to maintain and will improve technical reliability, since the risks due to damage by animals or extreme weather conditions will be a thing of the past.

Due to this renovation, Hoeksche Waard and Goeree-Overflakkee can count on a reliable and robust network grid with sufficient capacity to redeliver energy generated from renewable sources. The new distribution station transforms the voltage from 50 kV, which comes in through the overhead high-voltage lines, to 13 kV. The electricity is transmitted through the current 'transformers' to thousands of households in Hoeksche Waard.

Investment programme for electricity grids in Goeree-Overflakkee

In 2007, Stedin started an investment programme of over 100 million euros for the electricity grid on the island of Goeree-Overflakkee. These past years have already seen the realisation of several upgrades, such as increasing the capacity of the medium-voltage lines, disconnecting local grids, and increasing the capacity of the existing high-voltage line from Klaaswaal to Middelharnis. The upgraded and renovated stations and the electricity stations can be regulated remotely, ensuring that both the extent and the duration of the fault or breakdown will be limited in the event of any electricity outage.

Goeree-Overflakkee has a huge potential for generating electricity from renewable sources. The renewable energy can be transmitted to other parts of the Netherlands via the new connections.

Use of environmental management is essential

Our cables and pipelines are in areas where people live, entrepreneurs do business, or industrial activity takes place. Taking our broader context into account means that we engage in dialogue even before the start of projects and large-scale activities. We are open to suggestions and, as much as we can, we take various interests into account. Engaging in dialogue with stakeholders at an early stage will also often reduce costs, facilitate ongoing discussions about usefulness and necessity, and prevent delays or, in the worst case, cancellations.

Environmental management should therefore not be an activity of just a handful of environmental managers, but it should be a widely supported competence in the organisation. In order to make this a success, a tailor-made Environmental Management training course was developed

for Stedin employees in 2016. The training course is based on the principles of Strategic Environmental Management.

Part of 'being engaged in dialogue' is e.g. giving people a peek behind the scenes. To that end, fifty local residents were given the opportunity to tour the new electricity distribution station in Klaaswaal before the station was powered up. This was highly appreciated by the local community.

Sometimes it requires a joint effort with the local community to look for appropriate solutions, for instance for old station buildings that are on the national register of historic structures. A perfect example of that is the new electricity station on Oranjelaan in Dordrecht. It was constructed on the existing Stedin site. The station has been equipped with the latest technologies, which has made it more compact This has made it possible to replace three older, very sturdy stations along Oranjelaan in one fell swoop. The oldest of those stations dates back to 1942. After decades of loyal service, Stedin and TenneT are leaving these iconic buildings. All three buildings are on the municipal historic buildings register and will be preserved for the future. In consultation with the municipality of Dordrecht, local residents and entrepreneurs we are looking into a new purpose for them.

In 2016, the energy sector, civic organisations, and the Ministry of Economic Affairs and the Ministry of Infrastructure and Environment founded the Energy and Environment Learning Platform (known as LEO). LEO pools the knowledge of all participating parties, including Stedin, and encourages the development and application of environmental management for the energy sector. The participants in this platform help each other see how environmental management is developed internally and what results it achieves. This is the first time that market parties, government authorities and interest groups in the energy market transparently share knowledge on their approach in this field.

Non-regulated activities

The Joulz and CityTec business units handle non-regulated activities. The following overview presents a few appealing projects that Joulz and CityTec implemented in 2016.

Completion of grid connection for several datacentres

In September 2016, Joulz delivered a 150kV high-voltage station for a number of datacentres owned by an American multinational. This provides the customer with a dedicated high-voltage connection to the Dutch grid. The entire process, from design of the station and purchase of the high-voltage systems and civil and structural engineering components all the way to the installation, commissioning and delivery, was all handled and managed by Joulz. In addition, Joulz has accepted a follow-up project for the delivery of a third power transformer, as well as the contract for management and maintenance and faults and breakdowns.

Pilot on station automation for Stedin

Joulz is developing a modular approach for upgrading station automation. They use an approach which is 80% standard and provides 20% room for 'specials' per station. Stedin has 245 stations that are eligible for station automation and security. In 2016, a pilot project was started in Rotterdam's Spaanse Polder. Using the modular working method, our target is to finish twice the number of projects per year and to reduce the Total Cost of Ownership by 25%.

High-voltage stations for TenneT

In 2016, Joulz delivered the 380 kV high-voltage stations in Beverwijk and Oostzaan for TenneT. These high-voltage stations are part of 'Randstad 380 kV', which creates ring structures in the 380 kV high-voltage TenneT network. These types of rings provide increased capacity and improved reliability.

TenneT and Joulz are also working together on the new high-voltage station in Breukelen-Kortrijk. The partnership is based on an alliance contract, in which parties operate in parallel and share joint responsibility for the budgets. The regional 150 kV grid is linked to the national 380 kV grid. A milestone in this project was the transport of the 325-tonne transformer along the Amsterdam-Rhine canal and the A2 motorway.

Renovation of medium-voltage infrastructure

In 2016, the former Stedin Infraservices worked on various projects. Due to the regulatory framework, Stedin Infraservices has been operating under the Joulz name since the beginning of 2017. This business unit is carrying out the renovation of the medium-voltage infrastructure in the Maastunnel, commissioned by TBI. This business unit was commissioned by Nutricia to consult on and implement a new medium-voltage infrastructure for their production facility in Zoetermeer. They have also built a medium-voltage infrastructure on Maasvlakte in Rotterdam for SIF, an organisation working on production of offshore windmills.

Cycle path self-illuminates by using solar and wind energy

The Amsterdam port area has a cycle path which CityTec very innovatively equipped with lighting powered by solar and wind energy generated on-site. This self-reliant, autonomous system is a global first and the Amsterdam port has the honour.

As part of the pilot project, CityTec has installed 42 streetlights that no longer draw power from the regular (AC) electricity grid for their dynamic, dimmable LED lights. The renewable energy to power the lights is completely provided by the floating solar panels and mini wind turbine installed close by. These charge a battery, which supplies power to the streetlights through a dedicated direct current grid (DC). This approach eliminates energy loss, since direct current (DC) no longer needs to be converted to alternating current (AC) and vice versa. The ambition is to extend this pilot and take a step-by-step approach in providing lighting to the entire port area using this sustainable, safe and user-friendly approach.

Control box for public transport warning systems

In 2016 CityTec introduced a new control box to ensure safer crossings of bus and tram lanes. The control box is intended for public transport warning systems, consisting of a bell and flashing LED light. This box will ensure that faults and breakdowns are immediately reported to the control room and are corrected more quickly. This means that a technician will not first have to inspect the location on-site after a report.

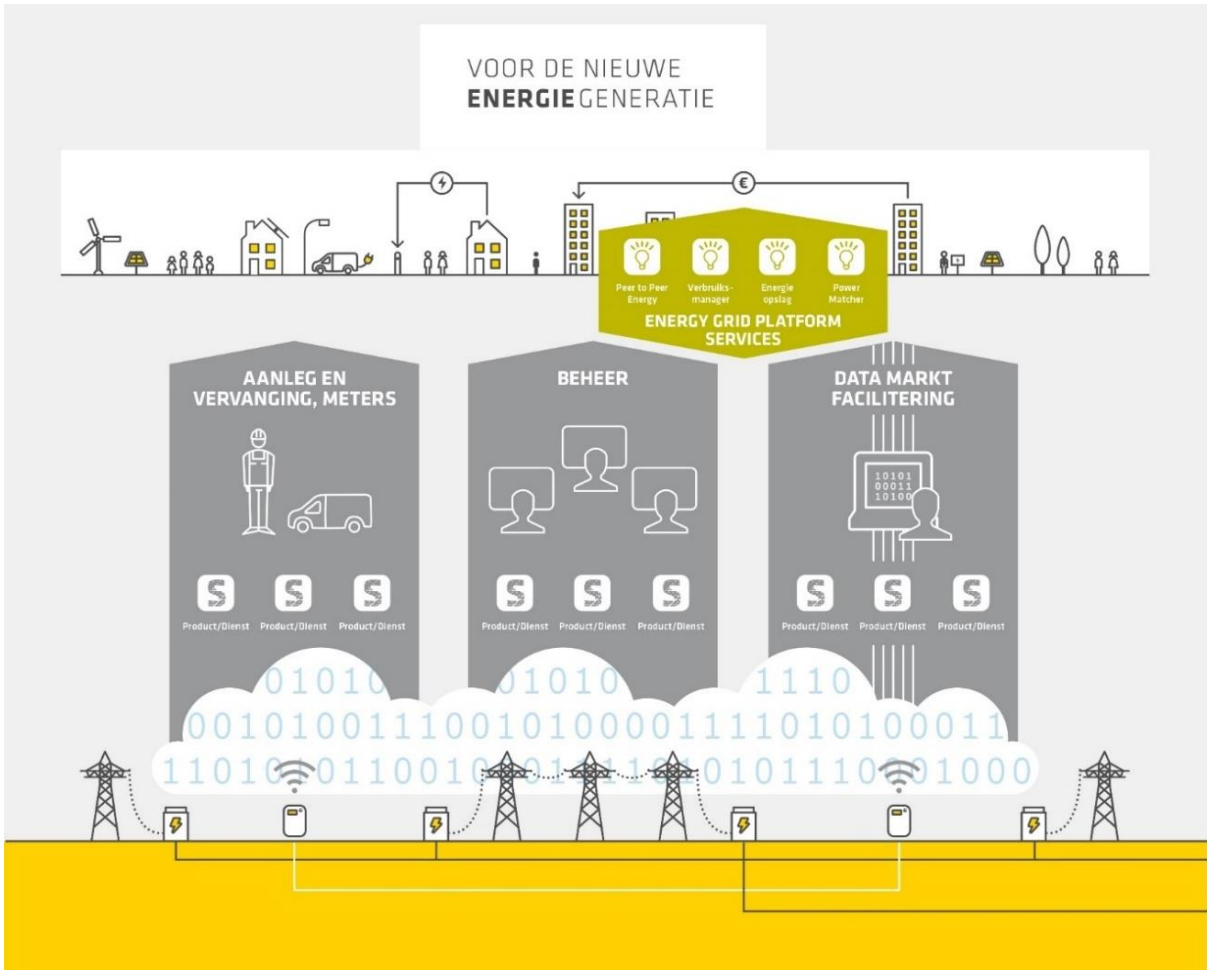
Energy transition

The switch from fossil fuels to renewable energy sources to ensure a sustainable energy supply is changing the energy landscape. Trends indicate that the pace of these changes is accelerating. Increasingly, customers define how the energy system needs to be set up. They do so by choosing decentralised generation of renewable energy, sustainable transport, extensive electrification and sustainable heating – or by not making those choices. In our greater Randstad area, major differences are emerging at the local level, requiring different local grid choices.

The new energy system: from linear to interactive

It is not yet certain when all of these energy transition developments will take place or what the scope will be. Accelerating the energy transition requires insight into the process, a manoeuvrable organisation and a flexible, interactive energy system.

We have seen that the new energy system is no longer a linear system in which energy flows only one way: energy is generated from a central location, then transmitted through the grid to the users. The new energy system is developing into an interactive system. This interactive system is characterised by energy that is generated from both central power plants and decentralised producers, and which is set up in such a way that it redelivers energy to the grid. It also provides support for new energy sources and new services that will increase the flexibility of the grid based on data.



The new energy system can be compared to a smartphone. The hardware of the phone is the foundation on which everything takes place. The operating system, the data layer, provides added value to the foundation because this enables market parties to develop valuable apps for end users.

The energy system can be approached more or less the same way. The grids are the foundation. By encouraging market parties and communities to develop innovative services 'on top of the grid', it will be possible to achieve maximum benefits from the grid, increasing the added value of the grid in society.

Our role in the energy transition

All Stedin Group companies play a key role in the energy transition. The Stedin grid is the foundation of the new energy system, while the professional expertise provided by Joulz helps customers in the energy transition, and the CityTec services create the public space of the future.

Working together towards a sustainable future

The service area of Stedin as a grid operator is a unique, busy, urban area with a complex energy infrastructure. The dependence on energy is evident in our current society. Energy should always be available, for this generation and for the generation to come. Stedin, in its role as an independent grid operator, has committed to accelerate the energy transition at a local level. With its grid and its extensive knowledge, Stedin is an indispensable link in bringing that new energy future to the urban area.

To that end, Stedin connects customers, government authorities and market parties and works in close collaboration with them to develop and achieve an integral vision on the local energy system of the future. Stedin is clear to all parties about the options for the energy transition, about the consequences of the choices, about the dilemmas, and about Stedin's preferences based on experience and expertise. In these preferences, the costs and benefits of society will be leading. Stedin will continue to be more outspoken on important energy themes in political and social discussions, or will kick off the debate itself.

Joulz is also a strategic sustainability partner for customers. Using cutting-edge technological solutions, Joulz is working on a reliable, affordable and future-proof energy supply and helping customers face the challenges that the energy transition will bring.

Energy transition requires choices: discontinuing the gas connection requirement for new buildings

In order to make other, more fitting choices at the local level, there does need to be room to make choices. Grid operators are currently legally required to connect each new-built home to the gas grid at the request of the property developer. Roughly three-quarters of new apartments are still connected to the gas grid, while there are sustainable alternatives available. Stedin handles about 10,000 connections every year in this region, and nearly 40,000 connections nationally. It will require investments of approximately 100 million euros annually. The Paris climate pact included agreements to seriously reduce greenhouse gas emissions. If all houses need to be CO_2-neutral in 2050, these investments in the gas grids will not bring the grid operators a return on these investments. That is why Stedin no longer considers it socially responsible to continue connecting large numbers of new-built houses to the gas grid. Energy-efficient new houses without a connection to the gas grid should be the new default.

In 2016, Stedin appealed to the political arena to cancel the mandatory gas connection requirement for new-built homes. But they were not alone in this. Together with the municipality of Utrecht, they have started a social and political discussion to discontinue the mandatory gas connection requirement for new-built homes. Municipalities would like to take the lead in making their districts CO_2-neutral, but have reached the legal limits defined by legislation.

Innovation and collaboration

Innovations are necessary to facilitate the rapidly changing energy landscape and collaboration is the key to success. That is why we take an active role in various experimental initiatives to encourage innovation or to research the effect of new developments on the grids – for instance to facilitate flexibility in the energy supply in order to ensure the reliability of the grids.

Flexibility

Flexibility is the capacity to align supply and demand in any way possible. Renewable energy sources, such as sun and wind, are fickle and not available on call. Sometimes there is more supply than demand, for instance on a sunny summer day. And sometimes there is more demand than supply, for instance on a windless, cloudy winter day, when everyone turns on their heat and switches on their lights at 17:30. Supply and demand of energy is not automatically aligned. This could lead to bottlenecks in the energy grid; we also call this congestion. Accordingly, we have searched the market

for partners that provide solutions for this issue, so we can ensure a reliable energy supply for our customers, now and in the future.

FLEX Acceleration Programme
One of these initiatives is the FLEX Acceleration Programme. The programme started in 2016. Stedin many market developments in terms of flexibility and opportunities to use flexibility solutions in the future. Through this programme, Stedin provides incentives for market initiatives that offer flexibility solutions and creates the right prerequisites to investigate the impact and effectiveness of the solution in relation to the electricity grid. A number of parties have already started.

Market initiatives
In collaboration with TenneT and the ETPA trade platform for energy, Stedin has worked out the details on how purchasing flexibility for congestion management might work using a trade platform, such as ETPA. Based on these details, a Proof of Concept will be drafted in 2017.

An example of encouraging market initiatives is the request for information that Stedin issued in 2016 for the replacement of the tone frequency (TF) signal for boilers. After the extensive roll-out of smart meters, the TF signal will be phased out. The TF signal switches various applications, such as day/night power for electrical boilers. Considering the potential value of flexibility for these electric boilers and the creation of new business models in the field of household appliance management, Stedin issued this request for information to explore whether this type of service could be transferred to the market. After the request, we conducted 23 interviews with market parties from the Netherlands and abroad. Based on these interviews, we have started a follow-up research study.

Pilot with Peeeks
Peeeks is a company that arranges more efficient energy distribution across the grid by ensuring that companies can make flexible energy purchases at the right time. Peeeks is specialised in providing power to business processes at a lower energy price for the customer. In collaboration with Peeeks, Stedin has launched a pilot to investigate whether the load of the medium-voltage grid can stay under a certain level by using demand-driven management. This should be able to prevent the grid from overloading. In the last months of 2016, Peeeks started customer acquisition in a specific region. The initial results have shown that companies are not very eager to participate at this point in time.

USEF
USEF (universal smart energy framework) is a non-commercial partnership that was founded in 2013 by Alliander, ABB, DNV GL, IBM, ICT, RWE-Essent and Stedin. Open specifications can be used to develop smart energy products, services and solutions, accelerating development in Europe and making smart grids a reality. Stedin implemented USEF on the Hoog Dalem energy project. In addition, USEF is already being implemented in the LomboXnet solar charging project. We have already seen very positive results from the Hoog Dalem energy project. The implementation of USEF not only ran very smoothly based on the USEF reference software, it has also shown that the redelivery peak of solar panels can be efficiently levelled off using the USEF process. During that time, the residents kept using their self-generated solar energy to maximum capacity. In the first months of 2017, tests will be done to see whether USEF will also be able to level off peak demand for heat pumps. After that, the new insights will be evaluated and implemented and a closer look will be taken at ways to fine-tune forecasts for flexibility management.

Working together at a European level
The energy transition will lead to a greater interdependency in operational management of distribution grids and transmission grids. In 2016, Stedin worked in close collaboration with TenneT and other European national transmission system (grid) operators (TSOs) and regional system (grid) operators (DSO) to present a highly visible profile at the European level by taking a leading role in establishing the European TSO-DSO Data Management Report. This report, which was very well received, has created the basis for future legislation on data management.

Heat transition

Together, we face the responsibility to preserve our planet for future generations. Our climate is under pressure. Global targets were set in Paris that were intended to ensure that CO_2 emissions were reduced as much as possible, keeping global warming under 1.5 to 2 degrees Celsius. That climate pact led to an Energy Agreement in the Netherlands and served as a guideline for the National Energy Agenda of the Dutch government. The Dutch aim is to achieve a CO_2-neutral built environment in 2050. That poses a serious challenge. Many Dutch homes are currently connected to the natural gas grid. More sustainable alternatives will lead to a sharp decrease in the demand for natural gas. Added to that, we are seeing a transition towards cleaner forms of mobility, such as electric buses and passenger transport, as well as hydrogen-powered systems.

Reducing CO_2 in the built environment will have major consequences for the electricity and gas grids that Stedin operates. The challenge for the grid operator is to make the grids suitable for continued electrification and to create flexibility. That approach will aid in levelling off erratic peaks, caused by generation from renewable sources. If demand for natural gas decreases sharply, there is the question of what approach the grid operator should use with regard to the installation, management and replacement of gas grids. The aim is to ensure that energy delivery remains affordable, reliable and available, but also continues to become more and more sustainable.

Infrastructure Footprint
The energy transition brings changes to the current model that was designed to supply heating services. In future, the energy system will often need a more local and integral perspective in order to reach the best solutions for society. In the Infrastructure Footprint project, Stedin has mapped out the integral energy costs for houses in six city districts. In calculating the integral costs, we have also taken a close look at the total costs of the energy supply for the customers. Customers pay for the delivery of electricity, gas and heat, and for the transmission of these forms of energy. In addition, they spend money on heating systems and increasingly also on solar panels and systems for energy management in the home. For customers, the total costs of their power supply are relevant. The Infrastructure Footprint methodology provides more insight into them.

Stedin calculated various scenarios in which several technologies have been applied, such as heat pumps and solar panels. These scenarios revealed that a choice in one district reduced costs for the local community, but that the same choice in a different district actually had the opposite effect. Moreover, customer choices led to an overloaded electricity grid in one neighbourhood, but not in another neighbourhood. Insulation is also important: heating for existing buildings that are not properly insulated makes it necessary to increase the capacity of the electricity grid much sooner than heating for well-insulated buildings. Each neighbourhood is different, which is why it is important to work in close collaboration with stakeholders to find the best solutions. Infrastructure Footprint helps in that endeavour. That is why Stedin has been using this method since 2016 to aid municipalities in their integral regional planning processes.

Manifesto: 'Let's start living without natural gas'
Replacing or installing gas grids is no longer self-evident in light of our ambitions. Investments in natural gas infrastructure are now occurring with a depreciation period of 40 years. It is only possible to really shut down the natural gas supply and remove its infrastructure once all connected owners have had their connection removed voluntarily. Simultaneously, investments are needed to make houses suitable for gas-free energy and to make cleaner energy sources available, such as district heating or electrical heat pumps.
Stedin wants to make an active contribution to facilitating a CO_2-neutral built environment. That is why Stedin signed a manifesto on living without natural gas at the National Climate Summit in 2016.

Stedin is the first grid operator to put replacement data for gas grids online
To keep sustainable heat services reliable and affordable from a societal perspective, it would be possible to make use of times when the existing gas infrastructure needs to be replaced. It is convenient to know when these replacement moments will be, so the investments of municipalities and residents can be more effectively aligned. Residents could, for instance, postpone the purchase of a new boiler to prevent a future divestment. That is why Stedin was the first grid operator in the Netherlands to make the replacement data for gas grids available online in 2016.

Engage in dialogue with the local community
In 2016, Stedin has also engaged in dialogue with regional stakeholders, working together to map which areas are the most suitable areas for initial roll-out and which parties are required for that, to analyse which alternatives are realistic and feasible, and when and how residents should ideally get involved. The starting point is an area-based approach with local solutions supported by the local stakeholders. This requires that all stakeholders have an open mind, are transparent about their interests, and are willing to reconsider their personal timelines and investments within the context of the interests of society.

Ambitions become reality
One of the examples where the reduction of CO_2 in the built environment has become a reality is the municipality of Woerden. Multiple factors converge here: the municipality of Woerden aims to become climate-neutral by 2030, the Groen West housing corporation plans to future-proof its properties through renovations, and Stedin has been assigned the task of replacing gas. In the context of a municipal initiative to encourage 'Zero-On-The-Meter' renovations, the municipality, the Groen West housing corporation and Stedin will be working in intensive partnership. This has led to a joint ambition to make a district in Woerden completely free of gas. The first step towards implementation will start in 2017.
In terms of heat transition, Stedin not only partners with municipalities and housing corporations; it also has an intensive partnership with Hier Opgewekt (12 visions for gas-free energy), Natuur & Milieu and the Warmte- en Koude Bureau Zuid-Holland.

Electric transport

The Netherlands is a trailblazer in the field of electric transport. We see a sharp increase in the number of electric and semi-electric cars. Charging these cars puts a considerable strain on the electricity grid. To keep the electricity grid reliable, we need new energy systems – such as Vehicle-to-Grid approaches, in which the car itself acts as storage. One of our internationally acclaimed pilot projects with Vehicle-to-Grid power storage is in the Utrecht district of Lombok, where we have joined with a consortium of partners to link local solar panels to smart charging stations for electric cars. The public charging stations can charge and drain the battery of all types of electric cars, effectively turning the car into a power storage cell.

Battery systems are also part of the new energy system. Power storage can level off the sharp increases and decreases in supply and demand of energy near charging stations. Renewable solar power also plays a key role in reducing the load on the grid. That is why Stedin has a keen eye on developments in this field. A good example is the rapid charging station at the Haarrijn petrol station alongside the A2 motorway. Working in close collaboration with Delft University of Technology, Alfen TBI and Stedin, Mr Green has launched an experimental initiative aimed at achieving a better understanding of how future market mechanisms might work. The initiative also enables continuous monitoring of peaks and drops in the power grid. The Haarrijn rapid charging station is not only connected to the energy grid; it also generates electricity. A big canopy on top of the charging stations is covered in solar panels. They charge a big battery that can be used to charge the electric cars that stop there. If this central buffer runs dry, the station automatically switches to delivery from the regular Stedin energy grid. Stedin was brought on board by the initiator of this rapid charging station to come up with the most efficient and effective solution. By continuously monitoring peak and off-peak load, the use of storage and local generation of electricity from solar power, this energy system could help Stedin avoid major investments in the grid.

Because Stedin truly values solid research on the energy grid, the charging options for electrical transport were researched in 2016. This research project was implemented by four students from Erasmus Centre for Future Energy Business, one of the RSM research centres. The topics they researched included which factors contribute to the purchase of an electric car, consumer behaviour in 'Shared Charging Behaviour', the options of rapid charging stations in urban areas, and whether a parking service for electric cars ('Valet Charging') might be a solution for the shortage of electrical charging stations.

Large-scale roll-out of smart meters (GSA)

The Energy Agreement states that customer insight into their own energy consumption will encourage energy savings. The smart meter makes it easy for customers to access this information. That is why grid operators will be offering all customers with a regulated small-scale connection a smart meter by 2020 at the latest.

Roll-out numbers

The societal objective is to equip a minimum of 80% of all households with a smart meter in 2020. Early in 2015, Stedin started large-scale roll-out of smart meters (GSA). The experiences with GSA in 2015 were used to implement improvements in 2016. Stedin reached an agreement with the Ministry of Economic Affairs in 2016 to equip at least 343,000 customers with a smart meter. That target has been reached. In 2016, approximately 351,000 customers were offered a smart electricity or gas meter, about 50% more than in 2015.

Since the start of the large-scale offer for smart meters early in 2015, approximately 40% of Stedin customers have been offered a smart meter, which translates to about 903,000 customers. 766,000 Stedin customers have accepted this offer. Offering smart meters in such large numbers is an extraordinary and highly complex operation. That makes it even more encouraging to see that Stedin has a clear focus on increasing these numbers. Of all the meters offered, 78% were installed in 2016. This is below the target figure of 80%. Stedin expects to catch up on these numbers in the next few years.

Customer satisfaction

Most customers are satisfied with the offer of the smart meter. In 2016, 85% of all customers gave it a score of 7 or higher. As is fairly inevitable in a grand-scale operation such as GSA, there have also been instances of dissatisfaction. For instance, approximately 8,000 complaints (2.2%) were submitted with regard to the offer of the smart meter. A majority of these complaints were resolved immediately by Customer Service. There have been no major claims, nor have there been any safety incidents.

Reputation of the smart meter

In 2016, an average of 89% of all customers considered the smart meter a useful addition to their household. Stedin, in collaboration with other grid operators, have made preparations for a nation-wide campaign of all grid operators about Our Energy Grid. This campaign was aimed at increasing public knowledge in the Netherlands about the energy grid and the smart meter. In February 2017, the campaign was launched in national TV commercials, on social media and through an online platform, among other channels. www.onsenergie.net

Fair Meter

We are constantly developing new versions of the smart meter. In 2016, we worked on new versions of the smart meter that are suitable for data exchange using our own (CDMA) telecom network and the GPRS network. The new generation of smart meters are also manufactured according to socially responsible business practices. This 'fair meter' is manufactured using commodities and labour processes that comply with the fair trade criteria.

This fair trade manufacturing for the new smart meter is the result of a unique tendering procedure that was concluded in 2016. The contract was awarded in part on the condition that the suppliers would continue working to improve the fair trade aspects of the meter. For instance, the selected suppliers can show that they have reduced their CO_2 emissions in 2016. Also, a Request for Information was issued which clarified the existing options to improve data collection on fair trade aspects and to boost them to the required level. And the Fair Performance Ladder, developed during the tendering procedure, has been extended to include a scoring tool to produce metrics for assessing progress on fair trade.

Governance

In 2016, Stedin, Joulz and CityTec were governed by the Executive Board of the Eneco Group. Stedin Group formally exists since 1 February 2017 and has its own Executive Board and a new Supervisory Board as per that date. The shareholders of the former Eneco Holding NV are now direct shareholders of Stedin Holding NV. See the overview of all shareholders online.

Corporate Governance

Stedin Group values good corporate governance. Accordingly, Stedin Group complies with governance requirements that the grid company is subject to under the Electricity Act and the Gas Act. Stedin Group is not required by law to comply with the Dutch Corporate Governance Code, but will determine in 2017 to address how to deal with the principles and best practices from the Corporate Governance Code.

Risk management

Within Stedin Group, Stedin is the business unit that generates the highest turnover. As a regional grid operator, Stedin has a statutory obligation to maintain the gas and electricity grids. In order to ensure that energy will always be available to customers and to fulfil their legal obligations, it is imperative to know and control all the risks. The risks we mention below currently only apply to the grid operator.

Risk management policy

Risk management cannot provide the assurance that risks will not occur, but it will make sure that the grid operator is aware of the risks and that they can take appropriate measures in the event that risks occur. Stedin's risk management policy is aimed at minimising the negative consequences of unforeseen circumstances on the results. These concern the financial results, including total costs of business and investments, as well as the non-financial results, for instance in terms of safety. The objectives for these results have been derived from the strategic objectives. Other strategic objectives are related to the acceleration of the energy transition, engaging in dialogue with customers and the community, and continuously improving services.

Risk tolerance

When drawing up, monitoring and modifying policy, Stedin always looks at the measure of risk tolerance. Risk tolerance can be divided into risk categories:

- **Safety**
  Stedin works on the realisation, management and maintenance of (sustainable) energy infrastructures. These activities also entail safety risks. When it comes to safety, we do not consider any risk acceptable. 'Not safe = Don't do it!' is the motto of the Stedin organisation.

- **Financial**
  The ACM imposes requirements on financial management and solvency (Decree on Financial Management of Grid Operators). Stedin has converted these into financial strategy forecasts for the long term. Risk tolerance in this field is derived from the financial management framework, in which a number of tolerance limits have been set, such as for the ratios EBIT/gross-net, (FFO + gross interest)/gross interest, FFO/Total Debt and Total Debt/Total Capitalisation.

- **Integrity**
  Stedin's risk tolerance in the field of integrity is low. Stedin aims to achieve an environment in which no significant fraud options exist. The Stedin Code of Conduct and underlying guidelines convert this low risk tolerance into daily practice and indicate what Stedin considers preferred behaviour and acting with integrity. In work consultations and workshops, considerable attention is paid to the integrity awareness of managers and employees. Stedin also has a contact centre for reporting integrity incidents, as well as confidential counsellors. Together, they ensure correct and confidential handling of integrity incidents. At all times, Stedin aims to comply with prevailing laws and regulations and will provide transparent accountability.

- **Reputation**
  A solid reputation and reliability are essential components of Stedin's core identity. That is why the risk tolerance is low; in this context, the impact category of 'limited negative reputation among stakeholders' is right on the edge of being acceptable. An example of reputation risk is performance and societal debate regarding the smart meter, which should not be just about reaching the targets for roll-out, but also about the usefulness and necessity of the smart meter.

Risk management

The Executive Board is responsible for risk management. They establish the procedures and guidelines and ensure compliance. They are supported by the Risk Management department. The Executive Board is accountable to the Supervisory Board of Stedin Group in the form of an 'in control statement'. In addition, there is a separate Internal Audit department. This department carries out independent audits and reports to the Executive Board and the Supervisory Board. The authorisation to enter into contracts on behalf of Stedin is documented in the Authority Manual.

In 2016, Stedin has implemented improvements in their risk management system by setting up an organisation-wide control matrix in which key controls have been identified. In addition, Stedin has a wide range of reports that are used for risk control, such as a CO_2 report, waste disposal report, compliance report, supply security numbers, ratio of men/women, employees incoming and departing, safety figures, and training and education figures.

In taking a risk inventory, Stedin uses the following principles to determine the interest and severity of the risk:

- Ensuring constant availability of electricity and gas by minimising grid faults and breakdowns;
- Securing a safe environment for the customers, the local community, Stedin employees, and the contractors hired by Stedin;
- Complies with laws and regulations, in particular the Electricity Act and the Gas Act.

Stedin identifies the following key risks and related control measures:

	Risks	Control measures
Strategy	Controllability of the impact of energy transition on the grids (sun, wind, congestion and stranded assets)	• The Executive Board adopts a Financial Strategic Plan, which has a five-year horizon, and will be reassessed annually based on the Total Risk Plan and the Grid Investment and Maintenance Plan. • Launching experimental initiatives to assess perceptions and impact.
Strategy	Performance and societal debate regarding the smart meter	• Advice on energy-saving options, partly in collaboration with market parties such as independent service providers, suppliers and housing corporations, according to the Energy Use Manager guideline.
Operational	Failure to achieve quality requirements for electricity grids, and safety requirements for natural gas grids, which leads to diminished performance in terms of supply security	• Over the next three years, research will be done in close collaboration with the Netherlands Organisation for Applied Scientific Research (TNO) and Liander, amongst others, to find out what is needed to maintain the current safety level. • Life Cycle Management based on deliberate investment and operational costs.
Safety	Insufficient safety awareness	• To raise safety awareness from its current level 3 to level 4 on the safety performance ladder in 2019. • To manage based on the number of workplace inspections, physical tours and toolboxes that management need to carry out.
Finances	Unpredictable financial results due to regulation	• The latest developments with regard to regulation scenarios (including impact analysis) are discussed monthly by various departments so they can take appropriate measures in good time. • Scenario analysis variations in Financial Strategic Plan. • Maintaining good relations with supervisory authorities.
ICT	Redundancies in ICT systems	• Implementation of a target architecture through the Strategic Portfolio Consultation. • Focusing on phasing out systems according to the schedule.
ICT	Reducing/preventing security risks (including cyber security)	• Using campaigns to increase risk awareness. • Developing and monitoring Information & Security policy by the Chief Information & Security Officer. • Commissioning network penetration tests, amongst others on the Stedin Technical Network.

Executive Board

Since 1 February 2017, the Executive Board has operational control of the holding company and bears final responsibility for the performance of the holding company and its affiliated enterprises . The Executive Board:

- develops the strategy and long-term plans;
- monitors the risk profile;
- manages the directors of the business units and staff departments;
- prepares the annual accounts;
- assesses the key performance indicators and the business plans of the business units.

The Supervisory Board appoints the members of the Executive Board. The Executive Board is accountable to the Supervisory Board and the general meeting of shareholders. The Stedin Group Executive Board consists of three members: Marc van der Linden, Judith Koole and Gerard Vesseur.

Up until 1 February 2017, there was a management team, consisting of Pieter Trienekens, Frans van de Noort and Gerard Vesseur, who were responsible for the business units that currently make up Stedin Group.

Supervisory Board

The Stedin Holding N.V. Supervisory Board advises the Executive Board and is charged with supervising the policies of the Executive Board and the general course of affairs of the Company and its affiliated enterprises. The Stedin Holding N.V. Supervisory Board has established two committees:

- A remuneration, selection and appointing committee consisting of Pieter Trienekens (chair), Dick van Well and Jules Kortenhorst. The committee advises on the remuneration of the members of the Executive Board and handles the selection and appointment of the members of the Executive Board.

- An audit committee which supervises key financial affairs. This committee consists of Dick van Well (chair), Theo Eysink and Tineke Bahlmann, and will meet each quarter to discuss finances and consults with the external accountant on at least two occasions every year. The Annual Accounts shall be submitted by the Executive Board to the General Meeting of Shareholders for adoption.

Financial

As a consequence of the enforcement decision of the ACM (Authority for Consumers and Markets) on 3 December 2015 and the decision on the objection filed on 20 June 2016, Eneco Holding NV has been split on 31 January 2017 into grid company Stedin Group and energy company Eneco Group. All shares in Eneco Energiebedrijf held by Eneco Holding NV have been transferred on 31 January 2017 to the 53 municipal shareholders in Eneco Holding NV. Stedin Netbeheer BV and a few sister companies have kept their position under Eneco Holding NV. On 31 January 2017, Eneco Holding NV has changed its name to Stedin Holding NV.

In this annual update, the pro forma results of Stedin Group have been presented as if the group existed in 2016 and 2015. The balance sheet is a representation of the starting balance sheet of the Stedin Group as per 1 February 2017.

Financial results of Stedin Group 2016 (pro forma)

(Amounts in € 1,000,000)

Pro forma profit and loss account for Stedin Group [1]	2016	2015
Net turnover and other operating income	1,173	1,148
Purchase costs	143	142
Gross margin	**1,030**	**1,006**
Operational costs	816	727
Operating results	**214**	**279**
Financial expenses	75	77
Profit before taxes	**139**	**202**
Corporation tax	34	51
Total result	**105**	**151**

(Amounts in €1,000,000)

Starting balance sheet for Stedin Group [2]	1-2-2017
ASSETS	
Fixed Assets	5,261
Current Assets	312
Total assets	**5,573**
Equity	2,455
Reserves	31
Long-term liabilities	2,227
Short-term liabilities	860
Total equity capital and liabilities	**5,573**

[1] unaudited
[2] unaudited

The final result after taxes over 2016 amounts to €105 million (2015: €151 million). Despite the reduced electricity tariffs as a result of the tariffs decree for 2014-2016 as laid down by the ACM (Authority for Consumers and Markets), the 2016 net turnover and other operating income has been €25 million higher than in 2015. This is primarily due to the increased turnover of Joulz Energy Solutions BV for external customers.

The purchase costs for transmission have remained virtually the same. This has increased the gross margin of Stedin Group compared to last year.

The total operational cost increased by €89 million to a total of €816 million. This increase can e.g. be attributed to considerably higher municipal distribution refund taxes, the offer and installation of smart meters which were at a higher level in 2016 compared to last year, the increase in engineering activities for third parties, and the expansion of ICT activities. Other key causes for the increase in costs included the costs of Joulz Energy Solutions BV related directly to turnover and the costs resulting from the demerger.

The municipal tax on underground pipes has gone up, due in part to higher rates and in part to an increase in the number of municipalities charging such taxes. This cost item doubled from €35 million in 2015 to €70 million in 2016.

Smart meters were offered and installed on a large scale, getting off to a good start in 2015 and gaining momentum in 2016. Other direct and indirect costs related to this process include the expansion of the vehicle fleet, telecom costs from the time that the meters are connected, write-off costs for the investments from previous years, and divestments of convention meters.

Investments in the regulated networks were higher in 2016 than the year before, totalling €402.2 million (2015: €360.0 million).

In accordance with International Financial Reporting Standards (IFRS), the gas and electricity grids in Weert were categorised as assets earmarked for sale at the end of 2016 and 2015. Early in 2017, Stedin and Enexis concluded their negotiations on the sale of these grids in Weert. The gas and electricity grids in the regions of northeastern Friesland, Amstelland (around Amsterdam) and Kennemerland (from Amsterdam to the coast) were recategorised at the end of 2016, in accordance with IFRS, moving them from assets earmarked for sale to material and immaterial fixed assets. This change was made in response to new facts and circumstances that came to light in 2016, making it less likely that the sale of these grids will be achieved within a year.

Future forecasts

2017 is the first year for Stedin Group, but the individual companies within the Stedin Group have a long-established track record, each in its own field. Consequently, we are confident about the future. There is also some degree of uncertainty. That uncertainty is an inherent part of the energy transition that we face. Stedin Group assumes that the costs of the energy transition will continue to be included in the regulatory framework and can be considered societal costs. The main point is that Stedin Group will continue pursuing its mission to facilitate ‘Sustainable energy for everyone’ with as much enthusiasm as ever.

Appendix

Regulated tasks for grid management

In accordance with the Electricity Act 1998, the grid operator has the responsibility:

- to provide operational grids and keep them maintained;
- to ensure the safety and reliability of the grids and transmission of the electricity over the grids in the most effective way possible;
- to install, restore, update or expand the grids, taking into account measures related to renewable power, energy conservation and demand-driven or decentralised electricity production, making it possible to accommodate the need to replace or increase the production capacity;
- to maintain sufficient reserve capacity for electricity transmission;
- to provide third parties with a connection to the grids;
- to provide transmission of electricity on behalf of third parties;
- to promote safe use of devices and systems that use electricity;
- to determine, at an energy producer's request, whether their production plant is suitable for generating renewable energy, or if it is a cogeneration plant that achieves a reduction in carbon dioxide emissions that can be determined by ministerial regulation, or if it is a high-yield cogeneration plant, or if the measurement system is suitable for measuring the electricity generated by the production plant and fed into a grid or installation;
- to measure the amount of electricity produced by a production plant for electricity from renewable sources or climate-neutral electricity or by a cogeneration plant;
- to connect to other grids and to carry out repairs on its own grid;
- to maintain all due confidentiality while finding a suitable way to publish data on connections between the grids, use of the grids, and allocation of transmission capacity;
- to provide customers with all the data they need for efficient access to the grid and for using the grid;
- to make provisions for customers in the event that an electricity supplier goes bankrupt;
- to ensure that small-scale users have a metering system installed for every connection, unless the customer has an unmetered connection pursuant to the terms and conditions;
- to handle management and maintenance of a metering system installed at a small-scale connection.

In accordance with the Gas Act, the grid operator has the responsibility:

- to operate, maintain and develop its gas transmission grid in such a way as to ensure the safety, effectiveness and reliability of that gas transmission grid and to minimise environmental impact;
- to provide sufficient information to other grid operators, gas storage companies and LNG companies to ensure that the transmission and storage of gas and the gas transmission grids connected to those facilities are safe and effective;
- to provide users of the gas transmission grid with all the data they need for efficient access to the grid and for using the grid;
- to provide the grid operator of the national gas transmission grid with information about the real-time flows of natural gas in its grid;
- to promote safe use of devices and systems that use gas;
- to connect to other gas transmission grids and to carry out repairs on its own gas transmission grid;
- to maintain all due confidentiality while finding a suitable way to publish data on connections between transmission grids, use of the grids, and allocation of transmission capacity;
- to make provisions for customers in the event that a gas supplier goes bankrupt;

- to refuse natural gas that does not comply with the feed-in specifications;
- to refrain from any form of discrimination between users of the gas transmission grids;
- to ensure that small-scale users have a metering system installed for every connection, unless the customer has an unmetered connection pursuant to the terms and conditions;
- to handle management and maintenance of a metering system installed at a small-scale connection;
- to determine, at an energy producer's request, whether their production plant is suitable for producing natural gas from renewable energy, or if the measurement system is suitable for measuring gas from renewable energy sources generated by the production plant and fed into a gas grid transmission grid;
- to measure the amount of gas from renewable energy sources;
- to provide anyone who requests a connection with a feed capacity of no more than 40 m3(n) per hour with such a connection;
- to provide anyone who requests a connection with a feed capacity of more than 40 m3(n) per hour with a connection to the closest connection point to the gas transmission grid that has a pressure level and sufficient capacity for such a connection;
- to protect its gas transmission grid from possible external influences.

Declaration of Compliance with Codes of Conduct for Grid Operators

'Declaration of Compliance with Codes of Conduct for Grid Operators regarding data from small-scale metering systems that allow remote read-out'

Name of legal entity: Stedin Netbeheer BV
Place of effective management: Rotterdam
Period: 1 January 2016 to 31 December 2016

For the proper performance of its services, Stedin Netbeheer BV in Rotterdam makes use of measurement data acquired from small-scale metering systems that allow remote read-out. Supplementary to the Personal Data Protection Act (Wbp), grid operators in the Dutch energy sector have drafted a code of conduct for the use, recording, exchange and storage of data acquired from small-scale metering systems that allow remote read-out.

The undersigned hereby declares that Stedin Netbeheer BV in Rotterdam has complied during the aforementioned period with the rules and obligations specified in the Code of Conduct for Personal Data Processing by Grid Operators in the framework of Installation and Management of Smart Meters for Small-Scale Users, version of 18 May 2012, Staatscourant [Official Journal] 2012, 9616.

In the framework of the intention to collect meter data from a group of small-scale users for the purposes of allocation and reconciliation of more accurate usage profiles, it has been noted that the provisions for this purpose in the Code of Conduct do not specify a frequency for permitted meter readings. This has been addressed by explicitly requesting unambiguous permission from the small-scale users involved to acquire the meter readings, as specified elsewhere in the Code of Conduct. A proposal to amend the Code of Conduct is being prepared which rectifies this omission.

Rotterdam, 28 March 2017

Marc van der Linden
Chairman of the Executive Board
Stedin Holding NV

About this update

This annual update is for the calendar year 2016 and consists of all business units and activities that are part of Stedin Group as of 1 February 2017. The facts and figures mentioned in this annual update have therefore been compiled pro forma.

In this update, we make every effort to present comparable figures for the preceding financial year. The update deviates from this principle where such information is unavailable. Subsequent annual updates will insert and supplement the relevant information.

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