



SHAPING SMARTER GRIDS FOR YOUR FUTURE

## **E.DSO Sustainable Grid Charter**





## **The E.DSO Sustainable Grid Charter**

Based on the contributions from Alliander, Enedis, e-distribuzione, Enexis, E.ON, ESB Networks  
Additional examples provided by: I-DE, STEDIN, Vattenfall

Edited by: Kirsten Glennung, E.DSO  
Brussels, November 2019

# E.DSO members stand for sustainability





# Table of Contents

<b>Forewords</b>	<b>4</b>
<b>Introduction</b>	<b>6</b>
<b>Europe's DSOs work for the UN Sustainable Development Goals</b>	<b>7</b>
<b>E.DSO Sustainable Grid Charter</b>	<b>9</b>
<b>Understanding the Charter</b>	<b>10</b>
<b>Environmental Articles</b>	<b>10</b>
Climate change mitigation	11
Climate change adaptation	12
Transition to a circular economy, including waste prevention and increasing the uptake of secondary raw materials	14
Pollution prevention and control	16
Protection of biodiversity and healthy ecosystems, and restoration of degraded ecosystems	17
<b>Social Articles</b>	<b>18</b>
Social inclusion	19
Neighborhood safety	20
Workforce safety	22
Equal opportunities	23
<b>Governance Articles</b>	<b>25</b>
Data, digital and cybersecurity	25
Ethical contracting	27
Responsible investment	28
Transparency	30

## Forewords

Dear readers,

When world leaders came together in Paris in 2015 and agreed to fight for limiting the rise in global temperatures, a piece of history was written. The historic commitment has translated into numerous regional and national policies. Not least in Europe, where the European Commission's 2050 strategy 'A Clean Planet for All' sets for decarbonization of the energy sector by 2050. E.DSO, the association of Europe's largest and leading distribution system operators, is committed to act in a concrete and immediate manner to answer the challenges of climate change.

However, none of it will come for free. To fill the gap to the sustainable future we desire, an annual 290 billion euros will need to be invested in the European energy sector. Not least will our distribution networks need significant investments to integrate rising shares of variable renewable energy sources to make new and disruptive ways of consumption possible. We are therefore pleased to see the European Commission stand by its targets with the Sustainable Finance Action Plan which aims to close the investment gap.

To ensure the development of a clean planet for all, sustainable investments classifications must look to sustainability in its full scope. It must ensure that people are treated fairly and that business operations are carried out responsibly. With the publication of the E.DSO Sustainable Grid Charter we wish to underline our commitment to sustainability in all its forms from environmental concerns to social fairness and responsible corporate operations.

On behalf of E.DSO I am looking forward to writing together with policy makers, investors and experts from other economic sectors, a prosperous ending to the chapter of the world's history on climate action.

**Christian Buchel**, Chairman of E.DSO



© Eneclis



© E.DSO

Dear colleagues,

Our society is facing one of the greatest challenges in the history of humankind. Climate changes caused by the way we live are becoming ever more evident with harsh consequences for both communities and eco-systems around the globe. Sustainability must thus be a key concern for any organization that claims corporate responsibility. E.DSO and its

members are fully committed to the engagement against climate change, and to limiting the increase in global temperatures as agreed in 2015 in Paris.

Changes in weather patterns, increase of wildfires, water shortages, drought – or floods, hurricanes are all element that require readiness and ability to react in a innovative a stronger way to guarantee adequate resilience of the electric distribution grids. However, sustainability challenges more than just the climate.

Although climate change requires our immediate action, E.DSO and its members remain concerned with their social as well as their governance responsibilities. The purpose of the E.DSO Sustainable Grid Charter is therefore twofold. It serves, first of all, as input to the sustainability debate initiated not least by the Sustainable Finance Action Plan and its Taxonomy which proposes guidelines for sustainable activities and thereby for investments to be considered sustainable. Secondly, the Charter confirms how E.DSO and its members master sustainability in all its aspects. With a total of 43 examples of sustainable business practices the Charter demonstrates that not only are E.DSO members committed to sustainability in the future, they are already doing it today.

I would like to thank our members for their valuable input to the elaboration of the E.DSO Sustainable Grid Charter and encourage all DSOs to take as much inspiration from each other's best sustainability practices as they possibly can. It is my hope that colleagues in other sectors will not refrain from letting themselves be inspired by this Charter.

**Roberto Zangrandi**, Secretary General of E.DSO

With the publication of the E.DSO Sustainable Grid Charter we wish to underline our commitment to sustainability in all its forms from environmental concerns to social fairness and responsible corporate operations.

# Introduction

The world is at a crossroads: decades of fossil fuel use have impacted the earth's climate and led to a series of global challenges which will require immediate and significant action or else they will become insurmountable. Under the Paris Agreement most of the countries in the world have committed to cutting emissions and to limiting global temperature rise to well below 2°C above pre-industrial levels. The effects of climate change have however already spilled into a series of additional global challenges, which are addressed in the United Nations 2030 Agenda through the 17 UN Sustainable Development Goals (SDGs).

In November 2018, the European Commission presented its 2050 vision "A Clean Planet for All", which provides a clear direction for Europe to achieve the temperature objectives of the Paris Agreement and fulfil the UN SDGs. Central to the Commission's strategy is the full decarbonization of the power generation by 2050 with more than 80% of the EU's electricity coming from renewable energy sources (RES). Distribution system operators (DSOs) are committed to contribute to achieving these goals, as neutral market facilitators, providing a vital service for society and enablers of the energy transition.

The decarbonization assumes an enhancement of the capacity of the European energy system to both integrate higher loads of renewable energy, as well as to accommodate new users and technologies which have previously relied on fossil fuels. Such enhancement does not come cheap. The World Energy Investment Outlook (2014) has estimated that between 2014 and 2035, the EU will need to invest a total of 650 billion USD into electricity grids to meet its decarbonization targets, 75% of this in distribution networks to which the majority of RES is connected. Without appropriate investments into electricity networks, specifically into distribution networks, the energy transition will not happen. E.DSO therefore warmly welcomes the Sustainable Finance Action Plan put forward by the European Commission to guide sustainable finance and close the investment gap, but underlines that sustainability spans wider than climate action.

---

With the Sustainable Grid Charter, E.DSO and its members state their commitment to Sustainability with regard to not only climate and environmental issues but also social and governmental issues, both now and in the future.

---

The following two pages summarize the content of the E.DSO Sustainable Grid Charter by use of the UN SDGs. The pages cover the SDGs that DSOs directly impact through their work, as well as the SDGs E.DSO members contribute to, because of the way they have chosen to carry out their work. This list may be read separately or together with the E.DSO Sustainable Grid Charter.

The Sustainable Grid Charter consists of 13 articles divided into three subsections covering Environmental, Social and Governmental commitments respectively. Each subsection breaks out the articles from the Charter pertaining to its area and gives examples of how E.DSO members are delivering on each of these articles. This is done both to make the articles more tangible as well as to demonstrate that E.DSO and its members are committed to Sustainability both now and in the future.

The Sustainable Grid Charter formalizes the aims set by E.DSO and its members. The Charter is not a contract, but rather a document to inspire, based on some of the best examples of sustainable business practices already performed by E.DSO members. The purpose of this document is to encourage policymakers and investors as well as DSOs to pursue Sustainability in all its forms in the electricity distribution industry.

## Europe's DSOs work for the UN Sustainable Development Goals

In 2015 the Member States of the UN adopted the 2030 Agenda for Sustainable Development, which shares a vision for the peace and prosperity for the people and for the planet, recognizing that many of the challenges which we are facing are interlinked. The vision consists of 17 SDGs, each broken down into specific sub-goals which call for action by the signatories.

While the signatories to the 2030 Agenda are the UN Member States, E.DSO and its members take active responsibility for developing a better world and fully endorse the UN SDGs. E.DSO members have identified a number of SDGs to which they contribute and take concrete action to achieve. Given the nature of their business and their role in society, DSOs contribute directly to the attainment of SDGs 7, 8, 9, 11 and 13. In addition E.DSO members contribute to goals 4, 5, 8 10, 12, 15 and 16 in how they have chosen to carry out their work.

### 4 QUALITY EDUCATION



- By actively contributing to attracting pupils and students to technical subjects in cooperation with teaching institutions.
- By providing inhouse training to ensure that current staff have the knowledge and skills needed to carry out their job in a safe and sustainable way.
- By offering a broad range of vocational training opportunities supporting an inclusive labor market.

### 5 GENDER EQUALITY



- By supporting the closing of the gender disparity in the field and investing in inspiring female pupils and students to pursue a technical career.
- By fighting discrimination against female staff members and rewarding equal work with equal pay.
- By supporting and encouraging women in their aspirations for management positions.

### 7 AFFORDABLE AND CLEAN ENERGY



- By integrating 90% of renewable energy sources into energy system.
- By offering grid-connections to all legally entitled consumers.
- By adopting flexibility solutions and smart grid technologies that enhance the grid's efficiency and optimise energy use.
- By planning grid expansions and maintenance in consultation with consumers, ensuring affordable connection tariffs.

### 8 DECENT WORK AND ECONOMIC GROWTH



- By pursuing zero accidents and applying high security standards to shield the workforce from potential risks.
- By adopting energy efficient technologies and supporting the decoupling of economic growth and energy consumption.
- By providing employment opportunities for a wide range of profiles supporting a broad inclusion and contributing to the fight against youth unemployment.

**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



- *By deploying smart infrastructure enhancing the grid's efficiency and ability to accommodate renewable sources.*
- *By investing in improvements to the grid infrastructure and its resilience, ensuring its reliability as well as affordability.*
- *By engaging and investing in international Research & Innovation projects to foster the development of an efficient and decarbonised energy system for the future.*

**10** REDUCED  
INEQUALITIES



- *By keeping the consumer in mind when performing maintenance and grid expansion ensuring that the costs are reasonable.*
- *By offering assistance and online tools to help consumers manage their energy consumption and bills, combatting energy poverty so as to minimise incidences of disconnection.*
- *By performing differentiated recruitment, giving candidates with limited education and experience opportunities.*

**11** SUSTAINABLE CITIES  
AND COMMUNITIES



- *By deploying smart switches limiting power outages and enhancing the safety and reliability of the power supply needed to sustain the economic activity of communities.*
- *By deploying insulated lines or underground cables, thereby improving grid resilience and ability to cope with extreme weather events.*
- *By integrating clean technologies such as electric vehicles which reduce the environmental impacts on cities.*

**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



- *By upscaling existing equipment and deploying solutions which help prolong the lifetime of the electricity infrastructure.*
- *By handling materials in such a way that facilitates their re-use in other production cycles.*
- *By cooperating with electricity suppliers who also commit to responsible consumption and production.*

**13** CLIMATE  
ACTION



- *By strengthening the grid's resilience and adaptive capacity to withstand extreme weather events.*
- *By improving the grid's capacity to facilitate development of sustainable energy resources and sector coupling and thereby facilitating the energy transition*
- *By deploying smart grid technology which enhances the grid's efficiency and helps limit line losses and thereby minimizes emissions.*

**15** LIFE  
ON LAND



- *By ensuring the safety and protection of eco-systems in contact with the grid, for example by insulating cables preventing the electrocution of birds.*
- *By replacing overhead lines with underground cables which minimises the risks to nature and the risk of causing wildfires.*
- *By handling waste and potential hazardous materials with caution following all governing procedures so as to minimise risk of pollution.*

**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



- *By operating lawfully and pledging to support human rights and in addition to only doing business with partners and suppliers who do likewise.*
- *By providing staff with clear guidelines for dealing with business partners so as to avoid corruption and other irregular economic conduct.*
- *By ensuring public access to relevant information while protecting consumer privacy.*



# E.DSO Sustainable Grid Charter

The Sustainable Distribution System Operator:

- 1** commits to facilitating the energy transition by optimally enabling the use of clean energy resources and the options of energy conversion, while making its own operations optimally carbon neutral also.
- 2** takes responsibility for the safe and reliable distribution of electricity, engineering the network for a world of increasingly extreme weather patterns.
- 3** operates with the minimum of materials necessary to conduct business operations safely and takes the life cycle of materials into account.
- 4** takes the necessary preventive measures to minimize pollution risks arising from its business operations.
- 5** develops and operates the grid, respectful of biodiversity and without harming eco-systems.
- 6** provides access to electricity for all and facilitates an inclusive clean energy transition
- 7** ensures the safety of the neighborhoods it services by taking preventative safety measures to protect all consumers in the operation and maintenance of the grid.
- 8** cultivates a healthy and safe working environment based on a culture of prevention and targets zero accidents in the workplace.
- 9** acknowledges the value of individual difference and supports equal opportunities for all, regardless of sex, nationality, age, religion, disabilities and educational background.
- 10** commits to taking the necessary measures to safeguard individual privacy and a secure data environment.
- 11** seeks the same environmental, social and governance standards from suppliers and other partner organizations as it has set itself.
- 12** invests in the grid, subject to financial due diligence with due regard for the consumer and the environment.
- 13** manages the grid in a transparent, fair and lawful manner.

# Understanding the Charter

The articles of E.DSO Sustainable Grid Charter follow the logic of the ESG Framework addressing environmental, social and governmental risks related to an organization and its operations.

The first subsection describes the environmental considerations corresponding to articles 1-5 of the Charter. This part of the Charter is based on the Sustainable Finance Taxonomy of the European Union (Commission proposal COM(2018)0353) which forms part of the Sustainable Finance Action Plan. It should be noted, that the legislative process regarding the Sustainable Finance Taxonomy of the European Union has at the time of publication of the E.DSO Sustainable Grid Charter not been finalized. The Charter therefore refers to the text adopted by the European Parliament at the first reading on 28 March 2019.

The second subsection unfolds articles 6-9 which concern social responsibility. As the Commission's Taxonomy proposal provides only limited coverage of social risk, the subsection is further informed by the Global Reporting Initiative (GRI) Standards and the UN SDGs.

The third subsection describes the governance considerations covered in articles 10-13 of the E.DSO Sustainable Grid Charter and is for the same reason as the previous subsection also based on the GRI Standards and the UN SDGs.

To demonstrate the commitment of E.DSO and its members to each of these environmental, social and governance sustainability issues, each article is supported by examples of relevant practices from one or more E.DSO members. The articles and examples may not always be consistent with all situations. This is because, as previously mentioned the E.DSO Sustainable Grid Charter is not a contract but a set of aims and practices to inspire, intended as much for investors and policymakers as for other utility operators.

## Environmental Articles

In its current form the Taxonomy directive lists six central environmental objectives in line with the direction provided in the EU's 2050 Strategic Vision 'A Clean Planet for All'. Investments must contribute to at least one of these six objectives, while not doing any significant harm to the rest in order to be categorized as sustainable. The purpose is to reward investments that support the attainment of a sustainable economy with a positive classification and mitigate the risk of green washing.

The first five articles of the E.DSO Sustainable Grid Charter build on the Taxonomy objectives which are:

1. Climate change mitigation
2. Climate change adaptation
3. Sustainable use and protection of water and marine resources
4. Transition to a circular economy, including waste prevention and increasing the uptake of secondary raw materials
5. Pollution prevention and control
6. Protection of biodiversity and healthy ecosystems, and restoration of degraded ecosystems

Because of the nature of their work, DSOs' contributions to these objectives lie primarily in the areas of climate change mitigation and climate change adaptation. However, the DSOs also pay close attention to issues such as rational consumption, waste prevention and recycling as well as to pollution prevention and the preservation of healthy ecosystems and habitats. The direct contact of the DSOs with marine resources is rather limited as subsea cables are rare on DSO networks. Therefore, concern for water as a resource is included with waste prevention in article 3. Consideration of water as an ecosystem is bundled into the sixth Taxonomy objective, which is covered in article 5 of this charter.

## Climate change mitigation

1

The Sustainable Grid Operator commits to facilitating the energy transition by optimally enabling the use of clean energy resources and the options of energy conversion, while making its own operations optimally carbon neutral also.

The climate change mitigation objective of the Taxonomy proposal relates directly to the Paris Agreement's target to keep global average temperature increase well below 2°C above pre-industrial levels. According to the European Parliament's Taxonomy text, actions which can be considered to contribute to this objective count processes, including transitional measures, that are required to achieve the temperature objectives of the Paris Agreement. The Sustainable Grid Operator commits to limiting harmful emissions by facilitating the efficient use of energy and the optimal application of climate friendly technologies.

The energy sector has a key role in the achievement of the Paris Agreement as one of the biggest emitters of greenhouse gases (GHG). A significant part of the energy sector's carbon footprint owes to energy losses. Improving the sector's energy efficiency is therefore central to mitigating its emissions. Additionally, for the DSOs a key deliverable concerning climate change mitigation is the enhanced ability to manage increasing amounts of variable renewable energy on the grid. This comes along with the capacity to accommodate new clean technologies such as e-vehicles and heat pumps, as well as servicing new customers who have previously depended on more carbon intensive energy sources. These efforts are linked to the attainment of UN SDG7: Affordable and Clean Energy, and UN SDG13: Climate Action.



### Example 1: Creating a more flexible energy system

The fluctuating nature of renewable energy coupled with an increased electricity demand puts Europe's energy infrastructure under pressure. Several E.DSO members are engaged in innovative initiatives to enhance the grid flexibility and optimize the use of clean energy. In their Energiekoplopers project Alliander together with its customers and an IT provider, tested a smart technology to help ease the pressure on the grid. The technology allows for automatic shifting of consumption to hours where the clean energy production exceeds the general demand. By lopping peak demand and increasing the use of clean electricity when available, the need for electricity generated from more carbon intensive sources as back up during peak hours is decreased.

*Example provided by: Alliander*



### Example 2: DSOs promote e-mobility, also in their own fleets

Several E.DSO members have rolled out electric vehicle (EV) charging infrastructure in their home countries. Importantly DSOs are also adopting the use of smarter and more eco-friendly cars themselves, often fitted with speed limiting technology to ensure efficient fuel consumption. The electrification of their own fleets helps DSOs reduce their own carbon footprint setting an example also for other vehicle users in their community.

*Example provided by: Enexis, E.ON*

### Example 3: Limiting distribution losses

GHG emissions as a result of electricity line losses constitute an important part of DSOs' carbon footprint. E.DSO members are committed to enhancing the use of the smart grid technology which enables a better overview of the grid operation. Thanks to the information that the smart grid technology provides, the DSOs can rapidly identify abnormal consumption patterns in their grid and take action so as to reduce the energy losses.

*Practice carried out by E.DSO members in general*

## Climate change adaptation

### 2

The Sustainable Grid Operator takes responsibility for the safe and reliable distribution of electricity, engineering the network for a world of increasingly extreme weather patterns.

The Parliament's draft text of the Sustainable Finance Regulation defines climate change adaptation as "the process of adjustment to actual and expected climate change and its effects". Scientists have long been saying that one of the effects of climate change would be more extreme weather. This is evidenced by the growing number of storms and extreme temperatures experienced throughout Europe in the last couple of years. Depending on the geographical location, the effects of climate change may include both extreme cold and hot weather as well as storms and floods.

Climate change also affects the DSOs. Notably, extreme weather events at times threaten to bring down the grid. In order to be able to carry out their core function of delivering safe and reliable electricity to customers, also in the future, the Sustainable Grid Operator commits to increasing the resilience of the grid, adopting different strategies depending on the circumstances. Climate adaptations activities implemented by the DSOs specifically contribute to UN SDG9: Industry, Innovation and Infrastructure, as well as indirectly to UN SDG11: Sustainable Cities and Communities, and UN SD15: Life on land.





### Example 4: Increasing the use of cables to prepare for the cold

In some areas, particularly in Northern Europe, DSOs are dealing with strong winds and very low temperatures, leading to heavy ice loads on overhead lines. The strong gusts in combination with the weight of ice loads on overhead lines, can damage the grid and risks interrupting part of the electricity distribution. To ensure safe and reliable distribution, overhead lines are replaced with underground cables in vulnerable locations as they are less susceptible to these risks. However, cables are generally more expensive and therefore investments are needed to increase grid resilience in these areas.

*Practice carried out by E.DSO members operating in cold temperature areas*

### Example 5: Preventing wildfires from bringing down the grid

The increasingly hot and dry summers increment the risk of wildfires. To limit the exposure of the lines to heat as well as to potential wildfires, DSOs often deploy underground cables especially in wooded areas. In cases where overhead lines are the preferred option, for example for economic reasons or because cables are impractical or impossible to install, DSOs take preventive measures to limit the risk of wildfires. To prevent wildfires from spreading to the electricity network and escalating the catastrophe, the DSOs monitor and manage vegetation in these critical locations.

*Practice carried out by E.DSO members in general*

### Example 6: Smart devices, sensors and switches detect network problems and restore power automatically

In cases where extreme weather and natural disasters cause faults in the network, smart technology helps DSOs detect these faults rapidly. For instance, self-healing grids through smart switches and intelligent local substations, can automatically localize a fault, isolate it and restore the system. Some smart meters can even transmit real-time outage alerts to the DSO. This makes it possible to react much quicker without having to wait for customers to call in and report the outage and limits the grid down-time.

*Example provided by: e-distribuzione, E.ON*



© Enedis / Robin Paul

### Example 7: Rapid response teams ready to move out

In order to deal with extreme weather events, many DSOs have established rapid response teams that can quickly be mobilised to restore power connections and deal with grid issues caused by natural disasters. For example, E.DSO member Enedis has created the 'FIRE' taskforce to cope with natural hazards. FIRE has 2,000 staff at its disposal, which thanks to 11 logistic platforms working all over France can be mobilised anywhere at any time. The weather monitoring and modelling tool GERIKO, enables Enedis to evaluate the potential threats to the network arising from weather events so as to be prepared to take action in the case of emergency.

*Example provided by: Enedis*

## Transition to a circular economy, including waste prevention and increasing the uptake of secondary raw materials

3

The Sustainable Grid Operator operates with the minimum of materials necessary to conduct business operations safely and takes the life cycle of materials into account.

The fourth objective of the Taxonomy proposal concerns economic activities contributing to the transition to a circular economy, including waste prevention, re-use and recycling, covering the entire life cycle of a product or economic activity in different stages of production, consumption and end of use. The Parliament text suggests this to include ways which contribute to improving the efficient use of raw materials and resources in production and to the design of resource efficient and durable products. Among other proposed means are activities supporting prolonging the use of products through reuse, upgrading and repair.

According to the latest data, the European DSOs operate over 10 million kilometers of distribution power lines and more than 4 million distribution transformers. The Sustainable Grid Operator shall ensure efficient use of materials as well as recycling materials across these extensive assets. E.DSO members engage in sustainable procurement practices and waste avoidance strategies, strengthening the implementation of circularity principles to their business. The DSOs' efforts regarding these activities contribute directly to the UN SDG12: Responsible Consumption and Production.



### Example 8: Use of flexibility to rationalize the need for new power lines

DSOs are using flexibility solutions to cope with grid constraints and will do so even more in the future, as this practice often is more cost-effective and can achieve the same result as otherwise costly investments in new physical assets. The application of flexibility solutions allows for more efficient use of the existing network and reduces the need for new materials, thereby decreasing waste production. Flexibility can be procured as a service from market parties, but some DSOs are also testing solutions involving DSO-owned storage facilities, connection agreements, and tariff- or rules-based solutions.

*Practice carried out by E.DSO members in general*

### Example 9: Circular procurement and life cycle assessment

There are several examples of DSOs involving their material suppliers in the tracking of input and output materials from their business activities. This provides the DSOs with in-depth knowledge of the flow of materials of the used components, their environmental impact and the degree to which they can be recycled. Increasingly, DSOs also adopt new procurement procedures based on product life cycle assessment, in compliance with ISO 14040:2016 guidelines and specific product category rules.

*Practice carried out by E.DSO members in general*



### Example 10: Upscaling of transformers

In general, the expected lifetime of distribution transformers is about 30 years. Through proper maintenance this lifetime can be prolonged significantly. Several E.DSO members report refurbishment of transformers extending their lives by up to 15 years. Furthermore, E.DSO member E.ON uses voltage-regulated distribution transformers which additionally minimize the need for new power lines. These practices help DSOs to cut costs by avoiding new purchases while at the same time reducing the company's waste production.

*Example provided by: E.ON*

### Example 11: A fair smart meter

In cooperation with the Dutch Government and various knowledge institutes, the two E.DSO members Alliander and Stedin developed the Fair Smart Meter, a meter which is produced in an environmentally sustainable and socially fair manner. At the heart of the ambitions of the Fair Meter is CO2 neutrality as well as circularity of the resources and raw materials. In this way, the Fair Smart Meter addresses the global issue of growing electronic waste due to the short life cycle which is typical of electronic products.

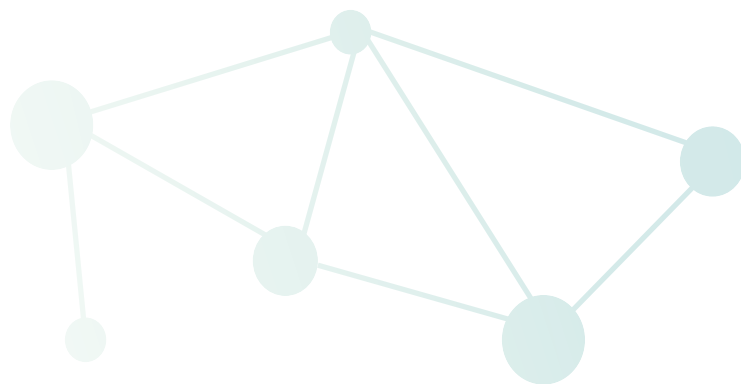
*Example provided by: Alliander, Stedin*



### Example 12: Recycling material for use in other production cycles

DSOs are concerned with the circularity of the material in electric cables and with increasing their recycling quality. DSOs generally recycle the old first-generation smart meters that consist of about 65% plastic materials, 12% iron, 7% copper and 7% circuit boards. After proper recovery at authorised plants, the materials from the meters can be re-used in other production cycles. For instance, components of circuit boards can be re-used in the goldsmithing sector, iron is reused in construction while copper can be recycled in the manufacture of brass.

*Example provided by: e-distribuzione*





## Pollution prevention and control

4

The Sustainable Grid Operator takes the necessary preventive measures to minimize pollution risks arising from its business operations.

According to the European Parliament's draft regulation text, pollution prevention and control include economic activities which contribute to “reducing air, water and soil pollutant emissions other than greenhouse gases” as well as to “improving levels of air, water or soil quality in the areas in which the economic activity takes place whilst minimizing negative impacts on, and risks to, human health and the environment minimizing significant adverse effects on human health and the environment of the production and use of chemicals”. The Sustainable Grid Operator shall be at least one step ahead of any potential pollution issue to prevent it from occurring.

A source for potentially hazardous waste that DSOs are in contact with is the dielectric mineral oil used in transformers. The DSOs are fully committed to complying with the regulation which strictly governs the use of these materials. For example, transformers containing polychlorinated biphenyls (PCB) levels higher than 0,005% have been largely phased out– and the few remaining transformers that contain levels marginally above this standard will be removed from operation at the latest by the end of 2025 – fully compliant with EU Regulation 2019/1021 on persistent organic pollutants. The measures taken by the DSOs in this regard contribute to UN SDG12: Responsible Consumption and Production, as well as to UN SDG15: Life on Land.

### Example 13: Changing the oils

DSOs are currently testing the use of vegetable oil in their HV/MV and MV/LV transformers, instead of the more traditional mineral oil. This implies a turning point in terms of eco-compatibility of the grid. In fact, unlike mineral oil that is obtained from refining petroleum products, vegetable oil is extracted from oilseeds or other renewable sources. It is an excellent substitute for mineral oil as it is non-toxic, has a high flame point, a high thermal capacity and is over 90% biodegradable.

*Example provided by: e-distribuzione*



### Example 14: Soil protection

DSOs take preventive measures to ensure that – should something go wrong – pollution is prevented, and hazardous materials are kept under control. The DSOs have for example installed special recuperation tanks in all their distribution transformers. This means, that if there is any oil leakage in a DSO transformer, the dripping oil will be collected in the tank preventing it from spilling on to the ground and contaminating the soil. E.DSO member I-DE provides maintenance crews with specific training on soil protection and managing spills should they occur. The crews are equipped with absorbent material and specialist equipment which can limit the spread of oil in case of accidental spill.

*Practice carried out by E.DSO members in general*



## Protection of biodiversity and healthy ecosystems, and restoration of degraded ecosystems

5

The Sustainable Grid Operator develops and operates the grid, respectful of biodiversity and without harming eco-systems.

The Parliament's text on the Sustainable Finance Taxonomy states that "an economic activity shall be considered to contribute substantially to biodiversity and healthy ecosystems or the restoration of degraded ecosystems where that activity contributes substantially to protecting, conserving and enhancing or restoring biodiversity and ecosystem services". This includes "nature conservation measures to maintain or restore natural habitats and species of wild fauna and flora at favorable conservation status to reach adequate populations of naturally occurring species and measures to protect, restore and enhance the condition of ecosystems and their capacity to provide services".

As man-made additions to the landscape, electricity infrastructure interferes with its surrounding natural environment. The Sustainable Grid Operator commits to minimize any direct or indirect impact which its network or operations might have on ecosystems and wildlife habitats. In this spirit it is practice among E.DSO members to partner up with other organizations with high levels of expertise in the environmental area to ensure a thorough consideration of issues related to ecosystems protection. The actions carried out by DSOs in this regard contribute directly to UN SDG15: Life on Land.



### Example 15: Operating networks in harmony with wild birds

Power networks can be a danger to wild birds. Species such as the white stork which tend to build their nests on low-voltage pylons risk electrocuting themselves causing interruptions to power distribution. E.DSO members are undertaking several measures to prevent the death toll of birds on their grid. In 2017, e-distribuzione Romania developed together with the Romanian Ornithological Society and other Romanian DSOs, a mobile app to collect data about the number and location of stork nests. In this way, they identified the poles that pose a risk and built alternative support platforms for stork nests. Electricity wires were insulated to protect wild birds with consequential reduction in the number of repairs needed on power lines. Since 2010 over 650 support platforms for nests and more than 3,800 insulation sheets on cables and electric poles have been installed by e-distribuzione Romania.

*Example provided by: e-distribuzione*

### Example 16: Improved network planning protects the environment

In order to protect the landscape and the surrounding environment, E.DSO members replace the conventional low voltage bare conductors with insulated overhead lines or underground cables. The use of insulated conductors lessens the need for cutting down the surrounding vegetation as a fire risk mitigation measure, allowing bushes and trees to grow more naturally. Insulated conductors, both overhead or underground, also reduce the risk of electrocution of wild birds.

*Practice carried out by E.DSO members in general*



© Fauquembergue Louis / Enedis

### Example 17: Ecological management of the vegetation

Distribution networks pass through all kinds of areas including sometimes remarkable natural landscapes. The DSOs carry a significant responsibility in safeguarding the flora surrounding their equipment. Therefore E.DSO member Enedis has partnered with Act4nature to promote sustainable ecological management of the flora under overhead lines including the limitation of use of pesticides. The objective of the initiative is to have zero pesticide use in the maintenance of green spaces near to Enedis' tertiary sites by 2020 and in 2024 for industrial sites.

Example provided by: Enedis

Given the types of activities they perform and the sizes of their businesses, E.DSO members play an important role in the well-functioning of their societies. This translates into a significant responsibility not only as a central actor in the energy sector and facilitator of the clean energy transition, but also as an important economic player. As part of their remit, E.DSO members are committed to exploring the opportunities for creating added value for all members of society.

In addition to its six Environmental objectives, the proposed Taxonomy Directive requires that economic activities in order to be considered sustainable are conducted in accordance with the International Labour Organisation (ILO) Core Labour Conventions. The Parliament's Taxonomy text adds that economic activities must also observe the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights. These guidelines and guiding principles serve to address, prevent and remedy human rights abuses in business operations.

The commitment by E.DSO members to social sustainable operations goes far beyond what is put forward in the Taxonomy proposal. The following is therefore primarily based on the GRI Standards set out for the industry and the relevant UN SDGs to acknowledge the extensive social responsibility taken by E.DSO members.

## Social inclusion

6

The Sustainable Grid Operator provides access to electricity for all and facilitates an inclusive energy transition.

Our society is to a large extent built on access to energy. It is the backbone of our economic activities. The loss of electricity connection impacts negatively on the living conditions of the disconnected. The DSOs therefore take their responsibility to provide safe and reliable electricity very seriously ensuring that energy access remains both physically and economically accessible to all customers. The Sustainable Grid Operator recognizes the diversity among customers, with regards to their energy consumption, as well as to geography and income and is committed to supporting the fight against energy poverty.

The European DSOs want the energy transition to benefit all customers. Albeit some customers may move faster on the opportunities that the transition provides than others, the Sustainable Grid Operator shall support the enabling of a just transition. These inclusive commitments are directly linked to UN SDG7: Affordable and Clean Energy as well as to UN SDG11: Sustainable Cities and Communities and contribute to UN SDG10: Reduced Inequalities and SDG17: Partnerships.

### Example 18: Technological inclusion of customers

As the energy transition relies on new technology, digitalization of the sector is a natural consequence. However, not all consumers are comfortable with the digital world. E.DSO members are therefore careful that the channels they use for communicating with customers are user-friendly and do not create any additional burden for the customer. E.DSO member Enedis has even partnered up with local authorities to teach customers, who may not be digitally literate, essential digital skills so that they can use the company's customer apps and benefit from the online customer service.

*Example provided by: Enedis*



© Abad Cyril / Enedis

### Example 19: Fighting energy poverty, supporting vulnerable consumers

Paying the electricity bill can prove challenging for customers with limited financial means. Rather than disconnecting non-paying customers, E.DSO members are committed to finding solutions. For instance, E.DSO member E.ON has developed pay-as-you-go schemes where customers pre-pay for their consumption, allowing them to better monitor their electricity use. Initiatives from other members include consultations with customers who struggle to pay their bills. The consultations aim to enhance customers' awareness of energy management as well as lowering their electricity spending. Other initiatives focus on government schemes and organizations which help finance home insulation upgrades so as to bring down the energy spending related to heating.

*Example provided by: Enedis, E.ON*



© e-distribuzione

7

## Neighborhood safety

The Sustainable Grid Operator ensures the safety of the neighborhood it services by taking preventative safety measures to protect all consumers in the operation and maintenance of the grid.

Electricity plays a central role in keeping our society safe. As distributor, the DSO is responsible for bringing safe and reliable power to the different services that keep society safe and functioning. In the case of a grid fault or malfunction, the Sustainable Grid Operator ensures rapid isolation of the fault and rapid solution of the problem so that as few societal services as possible are affected and that customers can carry on with their activities without risk.

It is true that accidents related to the electricity grid are ever fewer, however the distribution of electricity is not risk free. DSOs are responsible for maintaining their infrastructure and for ensuring the safety of the grid, and for communicating potential dangers with appropriate warning signs. The Sustainable Grid Operator furthermore strives for cooperation with other utility operators and local authorities in the maintenance and operation of the grid to ensure optimal spatial planning. These efforts are linked to UN SDG 11: Sustainable Cities and Communities.

### Example 20: Access for all

DSOs are obliged to connect customers to the grid practically regardless of where they may live. As Europe is completely electrified, connections can be provided without further ado. However, outside Europe, where many of E.DSO members also operate, this is not the case. The DSOs are very aware of their responsibility and strive to connect isolated areas, for example by implementing microgrid projects. Such projects contribute importantly to improving the living standards in isolated areas.

*Example provided by: e-distribuzione*





### Example 21: Fault isolation

It is common practice for DSOs to divide their grids into zones. The zone concept allows the DSOs to isolate the part of the network where there is congestion, preventing knock-on issues in the rest of the network. Thanks to modern smart meter technology and related systems, DSOs can detect congestion and other issues on the grid as they occur. The use of the zone concept in combination with modern technologies ensures that in the case of a network fault, only a limited number of customers are affected for a short while and that impact on vital activities is minimized.

*Example provided by: Vattenfall*

### Example 22: Physical safety of the lines

Although the insulation on modern overhead lines greatly reduces the risk of fire through contact, a risk remains as the network carries high voltage levels. DSOs carry out trials to minimize these risks and seek to constantly improve the safety of their power lines. New technologies and fast response teams allow the DSO to rapidly isolate and remove broken lines from service. By reducing the time for a broken line to be depowered, DSOs mitigate the risk exposure and keep the neighborhood safe.

*Practice carried out by E.DSO members in general*



© Enedis / Ahib Lachene

### Example 23: Utility cooperation

Installation of underground cables rather than erecting overhead lines is also a way to enhance the neighborhood security as it shields the community from the electricity grid. However, underground cables also require maintenance. The DSOs try to plan their cable maintenance in cooperation with other local utilities such as water companies that also manage underground infrastructure. By coordinating road excavation when servicing their underground assets, the DSOs and partner utilities reduce the overall traffic impact and minimize disruption of the local neighborhood.

*Example provided by: Enexis*

## Workforce safety

8

The Sustainable Grid Operator cultivates a healthy and safe working environment based on a culture of prevention and targets zero accidents in the workplace.

Working with electricity comes with a certain risk. The personnel of the DSOs can therefore be exposed to potentially dangerous occupational situations. Despite the inherent risk of working with electricity, DSOs commit to a vision of zero accidents and pursue a culture of prevention based on continuous dialogue within the company in order to fulfill this vision. The Sustainable Grid Operator supports and upholds the direction of international and national Safety authorities confirming that the safety of the workers is top priority.

Attention by the DSO to workforce safety and the general wellbeing of staff members is also vital to ensure the recruitment of qualified staff to be able to provide reliable electricity services in the future. E.DSO members take this responsibility very seriously and invest significant time and money each year in raising safety awareness and providing safety training to their staff personnel so as to help keep them safe. These concerns are reflected in the GRI Standards under the Aspect: Occupational Health and Safety and contribute to UN SDG8: Decent Work and Economic Growth.



© e-distribuzione

### Example 24: Avoiding the next accident

To achieve the zero accidents target, DSOs analyze not only all accidents which have occurred but also all “near miss” situations where an accident was prevented. This analysis gives a valuable insight into the risks facing the workforce and provides a fundamental baseline for improving the working conditions and safety. The DSOs also carry out work-safety audits on employees and on contractors and run information campaigns to highlight safety risks on a continuous basis.

*Practice carried out by E.DSO members in general*

### Example 25: Assistance from outside makes the workforce even safer

E.DSO members commitment to the safety of their workforce is as well reflected in their inclusion of third-party safety assistance which allows the staff to raise security and health concerns in confidentiality. At E.DSO member E.ON a third party, whose only concern is the well-being of the staff, provides advise to the company regarding implementation and development of company safety measures. Via the third party the staff is as well offered health advise and coaching free of charge.

*Example provided by: E.ON*

## Example 26: State of the art protective equipment

Maintaining and operating electricity infrastructure sometimes involves working at heights which carries an associated risk of falls. The Safety Jacket designed by D-AIR LAB in cooperation with E.DSO member e-distribuzione is made for those situations. The Safety Jacket protects employees working at heights should they fall and is based on technology used for motorcycling and skiing. The high-tech jacket is designed so that it can identify the conditions of a fall and in that event, inflate the built-in airbag protecting the worker.

*Example provided by: e-distribuzione*



## Example 27: Shielding the workforce by use of high-tech solutions

Virtual reality (VR) allows DSOs to provide their staff with operational training on maintenance and safety in a secure and safe environment. Although still in its infancy and expensive, the technology is already used by some E.DSO members. In addition to VR, some E.DSO members use Artificial Intelligence (AI) in carrying out high risk operations to help protect especially outdoor staff. The AI equipment is used to generate real-time mapping of the surrounding environment which in combination with previously gathered data, helps employees complete the work safely.

*Example provided by: e-distribuzione, E.ON*

## Equal opportunities

9

The Sustainable Grid Operator acknowledges the value of individual difference and supports equal opportunities for all, regardless of sex, nationality, age, religion, disabilities and educational background.

E.DSO members subscribe to the minimum safeguards laid out in the Taxonomy proposal regarding equal treatment of individuals and non-discrimination and are committed to being inclusive and fair in their role as an employer. The Sustainable Grid Operator must ensure that it does not create obstacles for any particular group of candidates entering at any level of work at the organization. Such obstacles may be produced by unconscious bias, which a socially responsible employer must commit to identify and dismantle. This also relates to efforts to achieve a balance of male and female candidates at entry and lower levels. The support to both groups in their aspirations to advance in their career within the organization will have a positive impact on the gender balance at management level in the medium to long term.

The Sustainable Grid Operator, like any large employer, must assume the responsibility that comes with being a significant contractor in the community by providing opportunities for a broad range of societal groups. In their efforts to be as inclusive an employer as possible, DSOs care for the different attributes of the general workforce by offering a wide range of employment opportunities that takes into account the contributions that different candidates can bring. These efforts contribute directly to UN SDG4: Quality Education, UN SDG5: Gender Equality and UN SDG10: Reduced Inequalities as well as UN SDG8: Decent Work and Economic Growth.



### Example 28: Commitment to Women's Empowerment Principles

Through the Women Empowerment Principles (WEP), UN Women and UN Global Compact work to foster gender equality in terms of participation and leadership in the workplace as well as in the market and in the community. E.DSO members pledge to observe these principles by promoting gender equality at all employment levels of their companies. In this spirit, E.DSO member E.ON for instance offers their female candidates mentoring programs to prepare and encourage them to go for management positions.

*Example provided by: e-distribuzione, E.ON*



### Example 29: Closing the gender gap in Science, Technology, Engineering and Mathematics

Ensuring gender equality in the electricity sector begins at primary and secondary school level by presenting energy studies as an attractive and accessible field to female students. E.DSO members contribute to awareness-raising initiatives in schools and universities to inspire female students to immerse themselves in Science, Technology, Engineering and Mathematics programs, also known as STEM. E.DSO member e-distribuzione has together with its parent group Enel, successfully been stimulating the interest of female students in this field through a program of open debates and contests arranged in cooperation with high schools across all of Italy.

*Example provided by: e-distribuzione*

### Example 30: Opportunities for all

E.DSO members offer many different types of apprenticeships covering a broad portfolio of work domains, appealing to a wide range of candidates. In the Netherlands E.DSO member Alliander is cooperating with local authorities, trainers and employment integration agencies by offering people with fewer prospects a chance to follow an apprenticeship. Their program entitled "Step2work" contributes to the inclusion of people with special needs and the integration of refugees in the labor force as well as to combatting youth unemployment in the country.

*Example provided by: Alliander*



© Enedis / Meignieux Romuald

### Example 31: Do what you do best - differentiated recruitment

In France E.DSO member Enedis has in cooperation with the national employment service created an academy which trains and teaches job seekers on how to install smart meters. The academy allows candidates to show their skills rather than write or explain them orally as otherwise usual in recruitment processes. By offering skilled participants a long-term contract without regard to their CV, the program promotes differentiated recruitment and equality of opportunity. The Academy was started in Valence and is now being extended to other parts of France.

*Example provided by: Enedis*



## Governance Articles

Traditionally the European DSOs are part of larger energy conglomerates, often “Vertically Integrated Utilities” covering much of the energy value chain from generation to distribution to retail of energy. However, on the road to establish a liberal and integrated energy market in Europe, DSOs over 100.000 customers are required to unbundle from their parent company. This is done primarily to increase transparency in the energy market and make it easier for the consumer to understand the roles and responsibilities of the different energy market actors.

While the DSOs are private entities, they perform, as distributors of electricity, a service fundamental for the well-functioning of society. The DSOs are therefore subject to thorough regulation, and, consequently, the profit margins are limited. Nevertheless, within these margins, the DSOs are committed to operate their businesses in accordance with principles of responsible and good governance. Given the limited attention dedicated to sustainable governance practice in the Taxonomy proposal, this part of the E.DSO Sustainable Grid Charter is based on the GRI Standards and the UN SDGs.

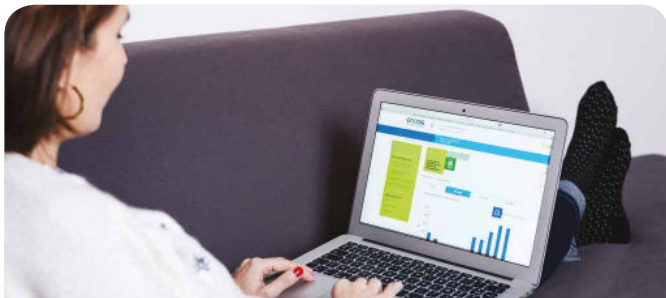
## Data, digital and cybersecurity

10

The Sustainable Grid Operator commits to taking the necessary measures to safeguard individual privacy and a secure data environment.

Data has rapidly become one of the most valuable traded goods. With the continuous digitalization of the energy sector, energy data value and quantum are ever increasing. The information allows the energy sector to improve its services as well as the efficiency of its operations. Going digital however also makes DSOs vulnerable to cyberattacks. Due to their pivotal role in society and in the energy system, DSOs must be especially cautious when it comes to cybersecurity, as an attack could shut down a whole community and put sensitive information at risk of theft.

DSOs manage considerable amounts of data on electricity production and consumption. Information which can be very valuable to certain actors while considered sensitive by the consumer. Whether sensitive or not, it is important that consumers have full access and control of their energy data and whom it is shared with. As owner of the smart meter, and thus responsible for a data source, the DSOs must be able to check its customers' consents for data processing before sharing any data with a third party. E.DSO members are in this regard strictly committed to the rules and guidelines in the EU General Data Protection Regulation (GDPR). The Sustainable Grid Operator shall continuously review its GDPR practices, to ensure clear communication and safeguarding of the consumer. These practices contribute to the attainment of UN SDG16: Peace, Justice and Strong Institutions.



### Example 32: Protecting your data

The smart grid technology provides the DSO with vast amounts of information about the consumption and production of electricity in their grid. This information is often of commercial interest to other actors in the energy system. However, E.DSO's members value the privacy of their customers and do not exchange this information other than in aggregated form which does not allow for identification of the individual consumer in conformity with governing GDPR rules. E.DSO's members as well respect the consumers' right to retain from giving permission to the sharing and processing of their data.

*Practice carried out by all E.DSO members.*

### Example 33: Safeguarding the system

E.DSO has, together with the European Network for Cyber Security (ENCS), and the association of European transmission system operators(ENTSO-E) launched a set of cybersecurity baseline requirements for smart meters and data concentrators to safeguard the network from cyberattacks. The baseline requirements consist of a set of considerations that can be used as a guideline by any DSOs when procuring and testing smart grid devices. The guidelines also make it easier for smart grid component manufacturers to understand the technical and security needs of the DSOs in general.

*Example provided by: E.DSO*



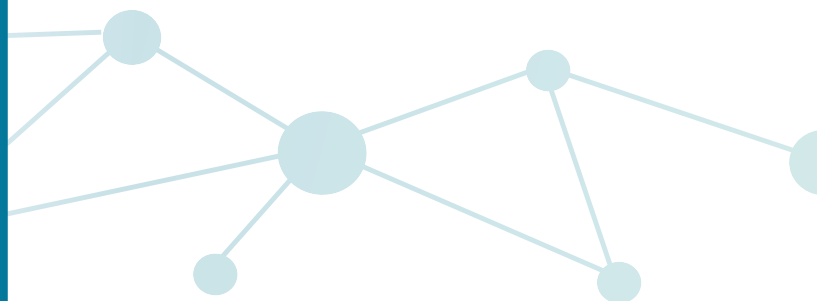
### Example 34: Cyber security preparedness

Fortunately, cyberattacks are not an everyday event. Nevertheless, DSOs and their employees must be prepared and equipped to safeguard the system against any potential cyberattack big or small. E.DSO member E.ON is computer-based simulations to provide the employees with practical skills and experiences in addition to theoretical knowledge from e-learnings. The simulations allow the employees to maintain their skills, enhancing the overall company cyberattack preparedness.

*Example provided by: E.ON*

© Enedis / Allavoine Louise

© e-distribuzione



## Ethical contracting

11

The Sustainable Grid Operator seeks the same environmental, social and governance standards from suppliers and other partner organizations as it has set itself.

While E.DSO members facilitate the energy transition, they do not operate alone. The development and production of cables, substations, sensors and all equipment needed to operate the distribution network comes from third party suppliers. As the grid is only as sustainable as its supplier of components, the Sustainable Grid Operator is committed to seeking providers that subscribe to at least similar environmental, social and governance standards as the operator itself applies. The Sustainable Grid Operator must therefore perform careful evaluation of potential suppliers before entering into business with them.

E.DSO members have long had formal standards for their suppliers consisting of different supplier codes of conducts. In addition to these codes, many DSOs have also signed the UN Global Compact. The criteria suppliers are evaluated on correspond to the principles which the DSOs themselves are evaluated on. These procurement practices contribute to UN SDG12: Responsible Consumption and Production as well as to UN SDG16: Peace, Justice and Strong Institutions.



### Example 35: Anti bribe and anti-corruption

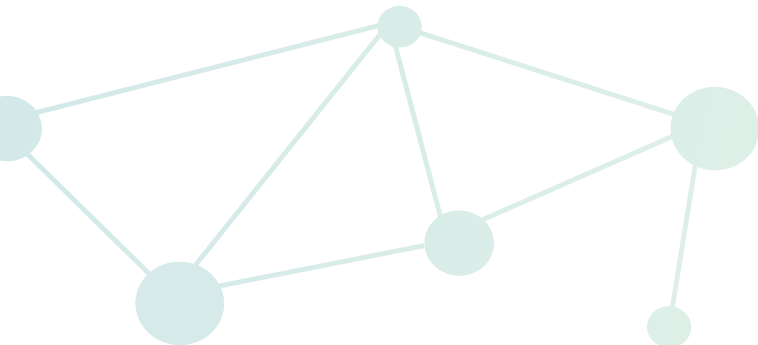
E.DSO members are committed to fighting corruption of all types at all levels of business, and do not accept bribes of any kind or other irregular practices from their suppliers. To ensure the implementation of this policy, members have elaborated specific guidelines enabling staff to recognize which gifts they may accept and which they may offer. Furthermore, potential suppliers are subject to thorough scrutiny to ensure they do not directly or indirectly support corrupt behavior or other irregular economic activities.

*Practice carried out by all E.DSO members*

### Example 36: Sustainable procurement

To ensure that their impact on environment is minimal, E.DSO members carefully analyze their suppliers' production cycle. Among the analyses carried out by E.DSO members, is the product lifecycle analysis as well as the analysis of the consumption of raw materials and energy in the production. E.DSO members furthermore take into consideration whether the procured good is produced in such a way as to facilitate the recycling of its raw materials at the end of the product's lifecycle.

*Example provided by: e-distribuzione, Enxsis*





### Example 37: Human Rights

E.DSO members are aware of their responsibility with regards to human rights and take these very seriously. Members continuously evaluate human rights issues and how they can contribute to enhance global respect of the articles of the UN Universal Declaration on Human Rights. The human rights risks related to DSOs primarily concern those parts of the supply chain situated in countries where law enforcement is poor. One of the ways E.DSO members deal with these risks is by requesting compliance and commitment to the human rights from their suppliers.

*Source: Practice carried out by all E.DSO members.*

## Responsible investment

12

The Sustainable Grid Operator invests in the grid, subject to financial due diligence with due regard for the consumer and the environment.

uring the reliable supply of electricity is a long-term responsibility which requires extensive planning and projections of future demand. Changes to the way we live and to the way power is produced and consumed, adds to the complexity of this task. The growth of European cities intensifies the electricity demand of urban areas. Meanwhile, new actors such as prosumers and aggregators are appearing in the energy system, whereas industrial sectors which previously relied on other utilities to provide their energy connect to the electricity grid as consumers. All these are factors which the DSOs must consider in their planning to ensure that the network is fit for the future.

The Sustainable Grid Operator is committed to developing the grid to facilitate the clean energy transition and accommodate new technologies. In doing so the Sustainable Grid Operator constantly keeps the consumer in mind, as well as society in general, ensuring that investments in the grid do not harm other sustainability objectives or impose unreasonable costs on the customers. This commitment is relevant to DSOs' contribution to the attainment of UN SDG7: Affordable and Clean Energy, UN SDG9: Industry Innovation and Infrastructure as well as to UN SDG 11: Sustainable Cities and Communities.





### Example 38: Consumer oriented maintenance investments

DSOs examine and evaluate their assets each year to plan their investments and maintenance. The aim is to ensure that the DSOs can continue to deliver on their responsibility to provide a safe and reliable electricity supply to all connected customers. E.DSO members are fully committed to this responsibility and emphasize the use of smart technologies to enhance the efficiency. However, careful technical and financial assessments are done to ensure that investment in enhanced grid performance makes financial sense and benefit to the customer.

*Example provided by: E.ON*

### Example 39: Internal carbon pricing

To ensure that investments do not run counter to their efforts to contribute to the overall decarbonization, E.DSO member Enexis has developed an internal carbon pricing scheme. The scheme applies to all grid investments and general purchasing decisions and aims to incentivize purchases that will bring down the company's own carbon footprint as well as its indirect emissions from its suppliers. Enexis' evaluation is based on information on carbon emissions retrieved in cooperation with supply-chain partners.

*Example provided by: Enexis*



### Example 40: Preparing for the needs of tomorrow

E.DSO members are committed to innovation and to preparing the grid for the energy system of tomorrow. While most of E.DSO members have their own innovation departments at group level, members also meet within the E.DSO Projects Committee to discuss aspects of innovation specifically related to distribution. The Project Committee members are highly experienced professionals who meet on a regular basis to identify RD&I projects at European level of interest to the DSOs, for example with the aim of finding new and better ways to assist the energy transition. E.DSO members have already successfully contributed to numerous national and European RD&I projects, while the E.DSO secretariat currently is involved in 5 EU funded R&I projects.

*Example provided by: E.DSO*

## Transparency

13

The Sustainable Grid Operator manages the grid in a transparent, fair and lawful manner.

Due to the role DSOs play in society and in the energy system, their transparency is a crucial issue. Given their importance for the economy, DSOs are requested to disclose extensive financial as well as non-financial information. Environmental disclosures are well covered in the Taxonomy proposal. However, transparency measures taken by E.DSO members go far beyond what is foreseen in the current text. Operating transparently also means demonstrating the fair execution of operations, playing by the rules and respecting the policy space and leadership in the countries, regions and cities where they operate. This commitment is in line with the objectives of UN SDG16: Peace, Justice & Strong Institutions.

For the Sustainable Grid Operator, commitment to bill-clarity must also be a central transparency concern. While the DSO does not set the price of the final electricity bill, the Sustainable Grid Operator desires that the customer electricity bill can be easily read and understood by the customers. In cooperation with other parties in the electricity supply chain that contribute costs to the customer's final bill, the Sustainable Grid Operator shall advocate for the clear and simplified expression of the cost and price of energy, supporting the consumers' ability to exercise the right to free choice of energy.

### Example 41: Providing disclosures

In addition to the financial disclosures which are required of the DSOs by law, E.DSO members disclose significant non-financial information which allows investors to assess the business. Sector specific disclosures are provided by E.DSO members within the GRI Electric Utilities Sector Disclosure, while information related to their emissions is disclosed according to the GHG protocol. Both procedures help improve transparency and provides guidance for further development of climate policies and business goals.

*Practice carried out by all E.DSO members*

### Example 42: Acting as a neutral market facilitator

Although E.DSO members often form part of a bigger energy group, they are legally and functionally separated from any other activity in the electricity value chain such as generation or transmission. The unbundling allows E.DSO members to act as neutral market facilitators, providing fair conditions to all market actors regardless of which parent company they belong to. The rules also enable DSOs to explain their responsibilities to the consumers facilitating transparency about the DSO role.

*Practice carried out by all E.DSO members*

### Example 43: Following laws and regulations

E.DSO members are committed to national as well as supranational law. Their policy experts regularly meet in the E.DSO Policy Committee where they discuss the policies needed to accommodate innovative solutions and foster the energy transition. E.DSO engages with policy makers in a transparent and open dialogue contributing with their technical knowledge from the field. Political positions adopted by E.DSO are furthermore transparent to the public and available on the E.DSO website.

*Practice carried out by all E.DSO members*







# E.DSO

SHAPING SMARTER GRIDS FOR YOUR FUTURE

**E.DSO - European Distribution System Operators**

Rue de la Loi 82, 1040 Brussels, Belgium

+32 (0) 2 737 1340

info@edsoforsmartgrids.eu

[www.edsoforsmartgrids.eu](http://www.edsoforsmartgrids.eu)

Follow us on:

