DSO ENTITY
DSOs FOR EUROPE

DSO Entity Annual Plan 2023

DSO ENTITY AT A GLANCE

Who are we

DSO Entity is the legally mandated EU association for European Distribution System Operators (DSOs), uniting all sizes of DSOs in Europe. It was formally established in June 2021 and mandated by the EU's Electricity Market Regulation (2019/943/EU) to help drive Europe's energy transition. DSO Entity represents more than 900 DSOs of every size, connecting more than 250 million electricity customers across all 27 EU Member States.

DSOs are the backbone of the changing energy system:

- DSOs integrate the largest share of renewable and intermittent power sources.
- DSOs manage volatile energy supply and demand challenges in flexible and decentralised grids.
- DSOs manage the digitalised grid and cooperate with Transmission System Operators (TSOs).
- DSOs enable consumers to participate in an increasingly decentralised energy world.

DSO Entity offers its members formal representation to the European Commission by providing technical expertise on electricity distribution grids, which operate primarily on the low- and medium-voltage part of the electricity network connecting households, industries, and other end-users.

Our mission

By taking an integrated view of the energy system, which includes customers, DSO Entity aims to strongly contribute to the energy transition, together with the entire energy ecosystem.

DSO Entity therefore acts as a strong and credible platform that

- Develops future proof network codes that reflect the new role of DSOs in the energy transition
- Provides neutral technical guidance on the integration of renewable energy sources, fostering efficient market performance
- Strengthens cooperation between DSOs and creates an interactive forum of expertise for its members; and
- Facilitates DSO-TSO cooperation, as well as dialogue with other stakeholders.

Our core tasks

DSO Entity's missions and pledges inspired its three pillars of activities:

- Participating in drafting the Network Codes and Guidelines which are relevant for DSOs;
- Promoting the optimal and coordinated planning and operation of DSO and TSO networks; and
- Organising expert groups and forums of expertise to exchange views on relevant topics relating to the energy transition.

By participating as a member, DSOs can actively contribute to create futureproof conditions for DSOs to actively facilitate energy transition.

Our values

DSO Entity is committed to ensuring a diverse and balanced representation of all electricity DSOs within the European Union. It provides a platform where DSOs can contribute to developing network codes, providing neutral expertise and sharing knowledge and best practices. DSO Entity strives for transparency in all its workflows and embraces an open-minded, fact-based and consumer-centric approach. Specific attention is paid to the feasibility and proportionality of network codes and country-specific differences. Applicability for all small and large members is considered central.

Our vision

In line with the European climate and energy objectives, DSO Entity is committed to supporting the path towards carbon neutrality in Europe by 2050 and has developed its vision as follows:

DSO Entity will support DSOs to actively facilitate the transition to a CO2-neutral energy system in the next decades, ensuring security of supply with future-proof network codes and with enhanced collaboration between TSOs and DSOs.

FOREWORD

2022 marked a historical turning point for Europe, the energy sector, and the society as a whole. In this context, DSO Entity, with no exception, carried out its first year of operation as the European association mandated to share the perspective of all DSOs, irrespective of their size and type. Few could have imagined that DSO Entity would have taken its first steps in a context of return of war on the European continent, which triggered energy upheavals. With concerns over the high dependence of the European Union towards gas import and the rise of energy prices, **accelerating the pace of the energy transition is vital** while ensuring benefits for every European citizen across the continent. Europe will have to go through an **unprecedented transformation** via the decarbonisation of its economy, the decentralisation of power generation, the electrification of uses, and the digitalisation of processes and services.

Representing more than 900 DSOs from all 27 EU Member States, DSO Entity has a unique opportunity to contribute to defining the necessary conditions for achieving carbon neutrality in Europe by 2050. DSOs will be at the core of the implementation of the proposals, already induced by the European Commission within the European Climate Law and the Fit for 55 Package and thereafter reinforced by the RePowerEU Strategy. Together with all our members, DSO Entity is ready to face the challenges of a more electrified future through a constructive and inclusive approach ensuring that all voices are heard.

This year will be a chance to further increase the involvement of our members and intensify the building of common and shared values in a spirit of cooperation, openness, and transparency. With such a balanced and diverse membership, DSO Entity can make a difference as an enabler of the transformation of the energy system. We will continue to act as platform of expertise that gathers and shares best practices among members and with external and institutional partners, especially the cooperation between all DSOs and TSOs of Europe.

On behalf of DSO Entity, we, as Chairman and Secretary General of DSO Entity, are looking forward to continuing to represent the collective interests of all our members and keeping pace with the strategic works of DSOs for the transformation of European distribution grids and the empowerment of consumers in the transition.

Vincenzo Ranieri
President

Peter Vermaat
Secretary General

CONTENTS

1. INTRODUCTION

After one year of full operation, DSO Entity remains a young organisation, still in its construction and establishment phase. This second annual plan aims to review the first steps taken in 2022 and look ahead to what to expect in 2023. The annual plan is **structured into five parts**, of which part three and four provide the most comprehensive and relevant information by summarising DSO Entity's activities and achievements of last year and laying out its plans for 2023.

- **Chapter I** summarises the contents of the annual plan, its objectives and the consultation process.
- **Chapter II** gives an overview of DSO Entity's governance, structure and core principles.
- **Chapter III** looks back at 2022 and describes the external and internal developments. 2022 was DSO Entity's first full year of operations, during which essential groundwork was laid and foundations built. These included further evolution of DSO Entity's governance, the establishment of six expert groups and building the Secretariat team. In the same year, the war in Ukraine triggered major energy upheavals that accelerated the transition towards decentralisation, so highlighting even more the need for a body such as DSO Entity to facilitate this transformation.
- **Chapter IV** describes the work envisaged during 2023 under DSO Entity's three key pillars, which are Network Code (NC) development, DSO-TSO cooperation and knowledge sharing. The chapter also summarises the expert groups' concrete work plans and provides a short overview of their deliverables. In addition to these internal developments, the chapter also describes DSO Entity's expectations externally and how they relate to its work.
- **Chapter V** is a summary and conclusions, highlighting once more the central role and vision of DSOs in the energy transition.

The **overall objective** of this annual plan is not only to report on the delivery of DSO Entity's mandated tasks under the Electricity Market Regulation (2019/943/EU) and other legislative acts, but also to keep all its members and stakeholders fully informed about its past and future activities, as well as about related European developments that influence DSOs' regulatory environment.

On the consultation process for the Annual Plan 2023:

DSO Entity started the internal consultation process with its Board of Directors in late 2022 and received approval on the general framework for the annual plan in October. In January 2023, the contents of a draft version of the annual plan were intensively discussed with Board members in smaller group sessions. Additionally, in a series of in-person meetings, the DSO Entity's Strategic Advisory Group (SAG) and the Country Expert Group (CEG) provided further advice. After preliminary approval was given by the Board of Directors of a draft version of the annual plan during its meeting on 6 February, DSO Entity contacted all its 900 members across 27 countries, inviting them to send feedback from their various perspectives. Lastly, DSO Entity held a targeted consultation with external stakeholders including the European Commission (EC) DG ENER, the European Union Agency for the Cooperation of Energy Regulators (ACER), the Council of European Energy Regulators (CEER) and European Network of Transmission System Operators for Electricity (ENTSO-E). The General Assembly finally approved the annual plan on 17 March.

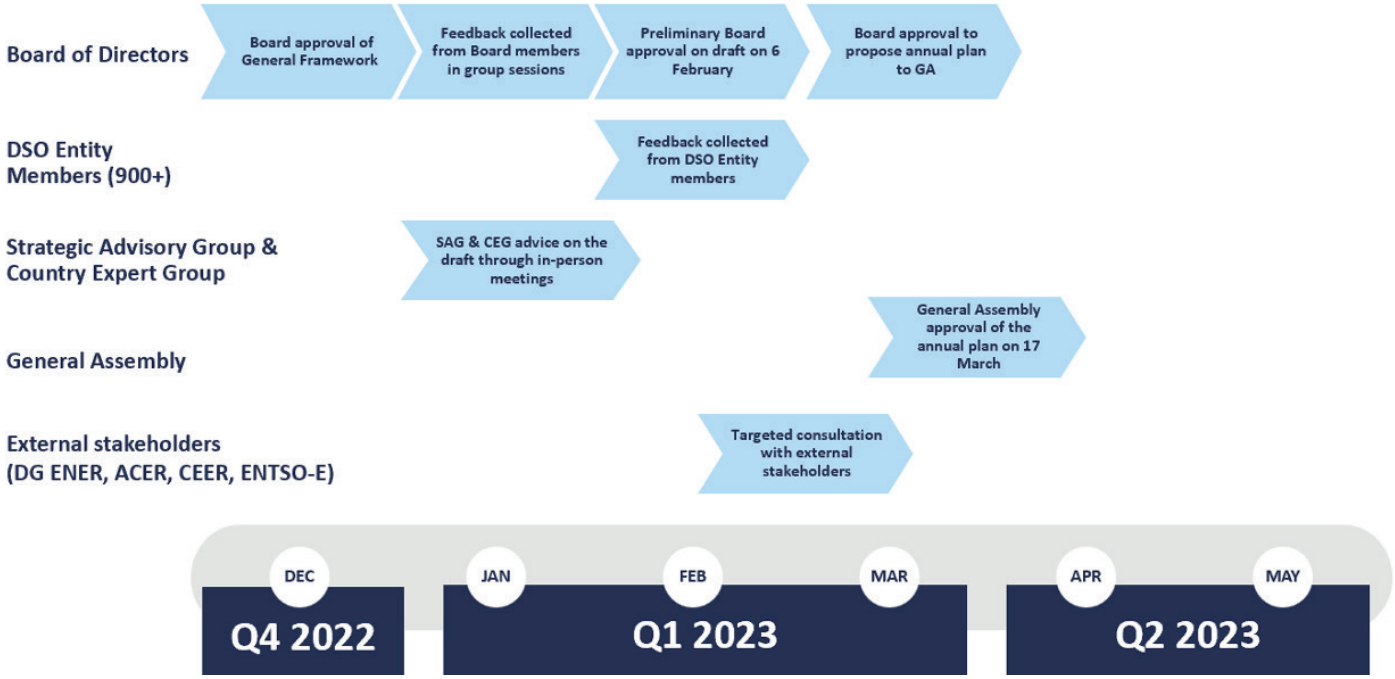


Illustration 1.1. Overview of the consultation process on the annual plan

2. KEY-ARCHITECTURE OF DSO ENTITY

This chapter explains DSO Entity's governance, structure, core principles and way of working.

2.1. Core principles and ways of working

A year and half after its formation in June 2021, DSO Entity has established a solid and balanced governance, supported by a dynamic and growing team of permanently employed staff, able to deliver the mandate of the association and to ensure its recognition as a key expert actor in the EU regulatory landscape.

DSO Entity's governance is built on the core principle of diversity in the three dimensions relevant for the association – gender, geography, DSO size – in order to recognise the variety of its members and guarantee the balanced representation of its entire membership in its different bodies[1]. To maximise the balanced participation of its members, DSO Entity strives to adopt a platform (illustration 2.1.) way of working by:

- Facilitating the processes within its member community: When developing network codes and guidelines and when sharing knowledge and best practices, DSO Entity reaches out frequently to all of its members, big and small, using modern ICT to reduce traveling time.
- Developing content from an integrated, fact-based and consumer-centric approach: DSO Entity enables electricity customers to play their important role in the energy transition.
- Being open-minded embracing necessary change, acting, and being solution oriented: DSO Entity chooses to be transparent, to encourage maximum participation and to limit complexity, seeking input from experts and non-experts alike.

Working at the European level, DSO Entity is both open and neutral about the feasibility and proportionality of network codes and country-specific differences. The association will pursue applicability for all members, large and small, rural and urban, regional and trans-national, to encourage involvement and ensure benefits for all its members based on the principle of balanced representation.

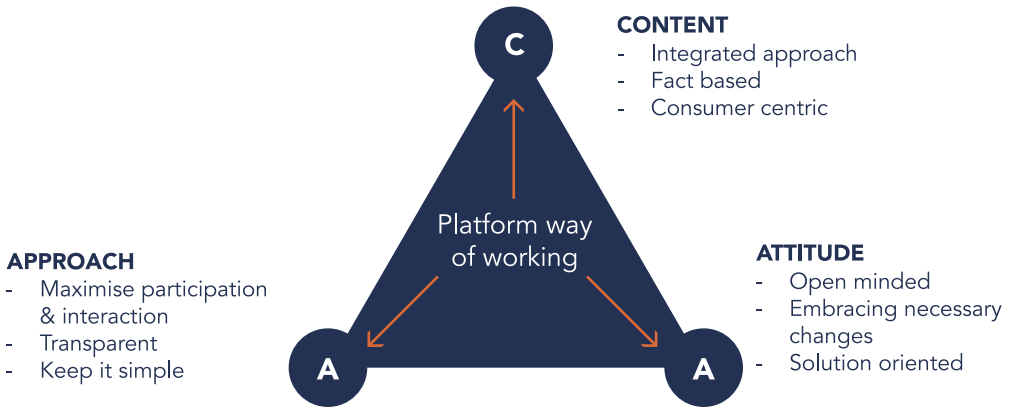


Illustration 2.1: DSO Entity strives to work with its members through a platform way of working

1. The membership of DSO Entity is distributed among three main categories: DSO with less than 100,000 connected customers, DSOs with more than 100,000 connected customers but less than 1 million and DSO with more than 1 million connected customers

2.2. Structure, Governance and Expert Bodies

The **governance of DSO Entity** relies on an engaged Board of Directors[2] elected by the General Assembly and who are involved in regular activities in close cooperation with the Expert Groups. The Executive Committee (ExCo), composed of the President and the three Vice-Chairs of the Board, provides support to the Secretariat and the Board, when appropriate. The Strategic Advisory Group (SAG), which guarantees cooperation with DSO associations and country representatives not represented on the Board, is a forum for consultation and can give advice on relevant decisions and projects. The Country Expert Group (CEG), composed of one DSO representative per Member State, is the contact body for the representatives of DSO members in all EU countries and can be consulted by the Board or the Expert Groups for an opinion on relevant projects or decisions. At the heart of DSO Entity's work are the four Expert Groups and two Task Forces that bring together more than 130 experts. All governance bodies contribute to ensuring a balanced representation of the membership.

In addition, **four Board Committees** advise and support DSO Entity on specific tasks: the selection of experts through the Expert Selection Board Committee (BESC), the relations and cooperation of DSO Entity with ENTSO-E through the TSO-DSO Board Committee (T&D BC), communication and knowledge sharing through the Communication Board Committee (CBC) and governance and relevant topics through the Executive Committee (ExCo – refer to above).

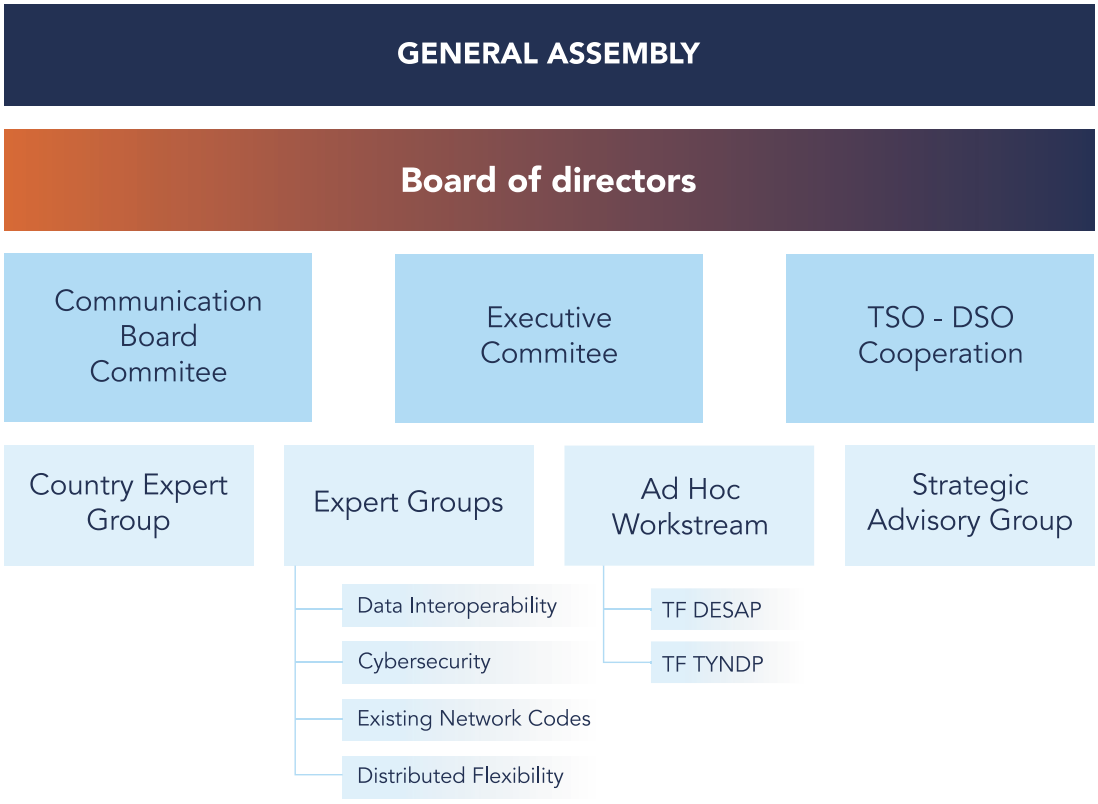


Illustration 2.2. The governance of DSO Entity

2. The Board of Directors of DSO Entity is composed of 27 Board members and one President.

The work of DSO Entity's members and its governance bodies are **supported on a daily basis by the Secretariat**. In January 2023, it numbered 10 permanent employees, reaching the staff objective set for 2022. With the growing team, the DSO Entity Secretariat is able to be more structured, with dedicated departments for monitoring EU regulatory affairs, supporting and coordinating expert groups, guaranteeing efficient member management, and facilitating professional communication.

At the heart of DSO Entity: the work of the Expert Groups

The Expert Groups provide the fundamental pillars of DSO Entity's work. They are responsible for the technical work involved in developing network codes and guidelines, as well as for developing technical papers on best practices and cross sectoral matters. They work upon requests from the Board, as well as on their own initiative, and they can also provide advisory opinions. Expert Groups are created and dissolved following a justified proposal of the Board to the General Assembly, on both a permanent or temporary basis.

Their composition reflects the **technical knowledge and geographical diversity** across the DSO members and respects their relevant expertise. Each Expert Group shall not exceed 30 members, with one third allowed to come from outside DSO Entity's membership. The Expert Selection Board Committee (BESC) is the guardian of capability and of the principle of diversity when selecting experts for Expert Groups and Task Forces, while also ensuring there is a balanced representation of DSOs, regardless of their size, country and other relevant criteria. At the end of 2022, four Expert Groups and two Task Forces have been established, one more than envisaged in the 2022 Annual Plan.

Key-facts on the six expertise bodies of DSO Entity:

- Expert Group Cybersecurity (EG CS)
- Expert Group Distributed Flexibility (EG DF)
- Expert Group Data Interoperability (EG DI)
- Expert Group Existing Network Codes (EG ExNC)
- Task Force Digitalising the Energy System - Action Plan (TF DESAP)
- Task Force Ten Year Network Development Plan (TF TYNDP)

	EG Cyber	EG DF	EG DI	EG ExNC	TF DESAP	TF TYNDP
Date of establishment	March 2022	March 2022	May 2022	Oct. 2022	Oct. 2022	Nov. 2022
Number of experts	24	30	19	21	20	16
Represented countries	16	18	10	14	13	11

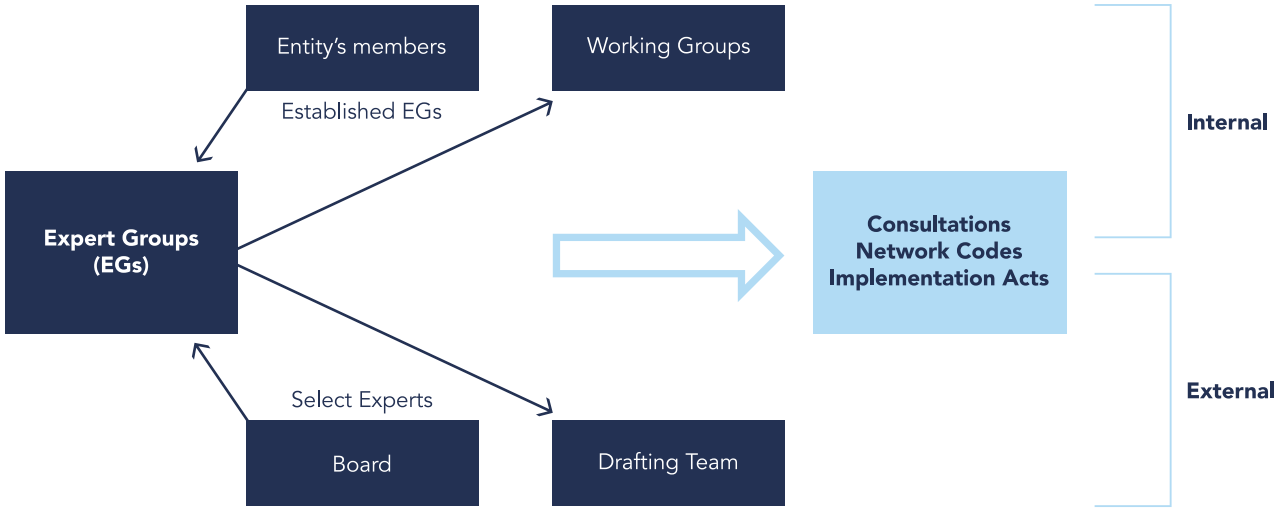


Illustration 2.3. Expert Groups

Mandated tasks and beyond

The Expert Groups' core work and main tasks derive from the mandate given to DSO Entity in Article 55-56 in the Electricity Market Regulation (2019/943/EU) and other legislative and non-legislative acts such as the TEN-E Regulation[3] (2022/869/EU) and the Action Plan on the Digitalisation of the Energy System[4]. The cooperation with ENTSO-E on drafting, implementing and monitoring the network codes and guidelines relevant to the operation and planning of distribution grids takes center stage. However, the establishment of technical network codes is not an isolated activity, but closely connected to broader European strategies and perspective. It encompasses the digitalisation of the European economy, the creation of a common data market, the EU Green Deal and the climate neutrality objective. As a result, other important activities include the identification of best practices in areas such as network planning, the integration of Renewable Energy Sources (RES), facilitating demand side flexibility or contributing to the digitalisation of DSOs. This interconnection is described in greater detail in Chapter IV.

3. Regulation (EU) 2022/869 of 30 May 2022 on guidelines for trans-European energy infrastructure
4. Communicaiton (EC) 2022/552 final of 18 October 2022 on Digitalising the energy system - EU action plan

3. LOOKING BACK 2022:

BUILDING DSO ENTITY IN TIMES OF ENERGY UPHEAVAL

After the formal legal establishment of DSO Entity as an association, the election of its first Board and the appointment of its Secretary General in late 2021, 2022 was its first full operational year during which it carried out essential groundwork and built its foundations. In the same year, the war in the Ukraine triggered major energy upheavals that accelerated the transition towards decentralisation, so highlighting even more the need for a body such as DSO Entity to facilitate this transformation. This Chapter gives an overview of external events that impacted DSOs, as well as DSO Entity's internal developments and activities in 2022.

3.1. Decentralised revolution highlights the role of DSOs: external challenges

A year of emergencies and effects on DSOs

The year 2022 marked a "Zeitenwende" (turning point) in European (energy) policies. It accelerated the transition towards a more electrified and decentralised energy system and, thereby, especially affected DSOs. The war in the Ukraine and related concerns about security of supply in the light of high energy dependence on Russian gas further sped up Europe's decarbonisation and diversification objectives. The need to diversify from Russian gas increased energy-saving measures and **boosted decentralised electrification and the deployment of (domestic) renewable energy sources**.

As a result, the war gave additional impetus to a development that had already been initiated by the adoption of the first European Climate Law (2020)[5] codifying the EU's objective to achieve carbon neutrality by 2050 and the **Fit for 55 package** (FF55) part I (July 2021) and part II (December 2021), together with proposals to increase renewable gases including hydrogen. The proposals of the Fit for 55 packages aim to increase the EU's energy targets and to align the policy measures in keeping with the new goal of climate neutrality. This package is expected to have both direct and indirect repercussions on DSOs. Some of the provisions directly address DSOs in the context of the energy system integration, improved TSO-DSO cooperation, a common network planning for electricity and gas, and new requirements for data sharing. However, the greatest effects will be indirect: DSOs will be the (invisible) technical enablers of the higher targets for expanding renewables, electric vehicles and realising energy savings by connecting renewables, heat pumps and electric vehicles to the grid and enabling flexibility solutions. Obviously, DSOs will be the technical facilitator of the EU's vision of a more decentralised, decarbonised and digitalised energy system.

Although at a first glance, DSOs seem not to be at the forefront of the Fit for 55 proposals, they remain the enablers of many of the objectives of this decentralised transition. These objectives have been deemed even more important, given the need for faster diversification and speedier renewable deployment. The European Commission acted accordingly and proposed its **REPowerEU**[6] proposals in March and May (box 1), in which it foresaw more ambitious targets, obligations for the deployment of decentralised renewables and an accelerated electrification of the heating and mobility sector. Additionally, in December 2022[7], it adopted a temporary framework to advance permitting procedures for renewables – including grid infrastructure extension and partly grid connection permits – as well as promoting further energy efficiency and saving measures. In addition to specifying gas saving measures, in October it tackled the

5. Regulation (EU) 2021/1119 of 30 June 2021 on establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999
6. Communication (EC) 2022/230 final of 18 May 2022 on RePowerEU Plan
7. Council Regulation (EU) 2022/2577 of 22 December 2022 laying down a framework to accelerate the deployment of renewable energy

electricity sector and approved (peak) demand reduction targets in a fast-track procedure[8]. Demand response should also be enabled through more distributed flexibility solutions at the local level, including households and end-energy consumers where possible. All of these demonstrate the increasingly important level at which DSOs are operating.

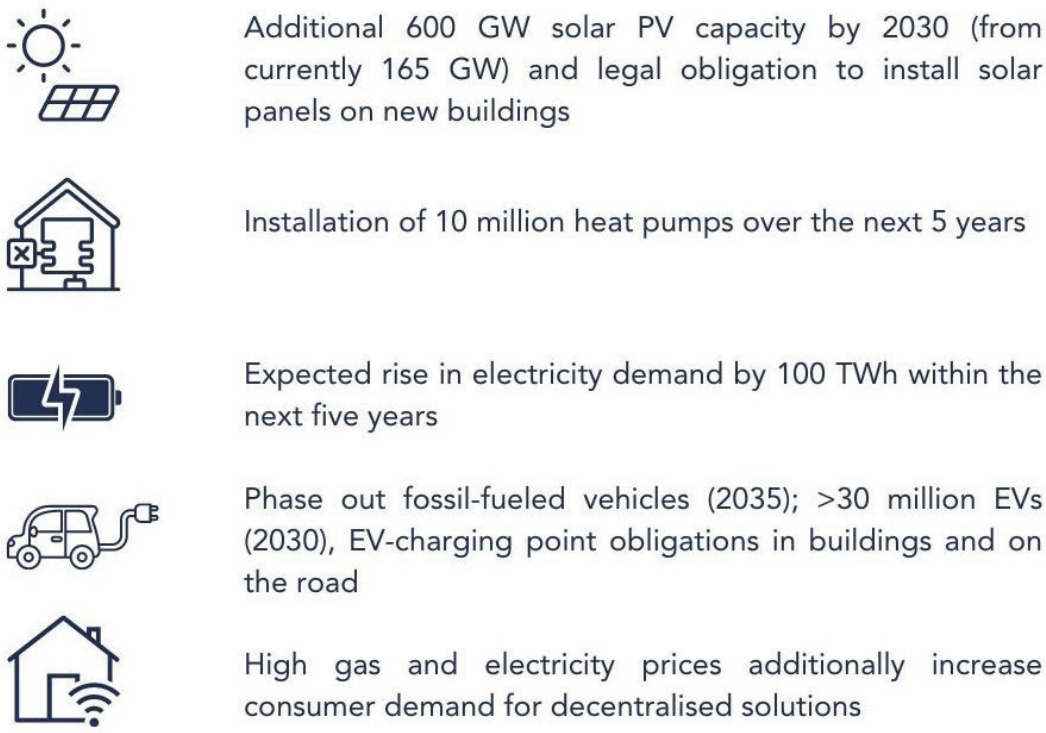


Illustration 3.1: Some highlights of the EU's regulatory activity with repercussions for DSOs[9]

By pushing for more decentralised (renewable) solutions, the measures above also aim to alleviate the effects of high gas and electricity prices on consumers and to build on a more resilient system for the future, for example by using renewable self-production as a hedging strategy. Major and persistent disturbances of the European energy markets and the negative effects of high gas prices on electricity, have led the European Commission to announce a reform of the current **electricity market design** for the first quarter of 2023. The objective of this reform is to provide cheaper electricity to consumers while preserving the merits of the market. The relevance for DSOs will depend on the scope and comprehensiveness of the reform.

8. Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices
9. References for numbers in illustration: Communication (EC) 2022/230 on REPowerEU Plan; Communication (EC) 2022/221 on EU Solar Energy Strategy; Communication (EC) 2020/789 Sustainable and Smart Mobility Strategy. Eurelectric (estimate): https://cdn.eurelectric.org/media/6016/eurelectrics-position_revision-f-gas-regulation-h-08C46189.pdf

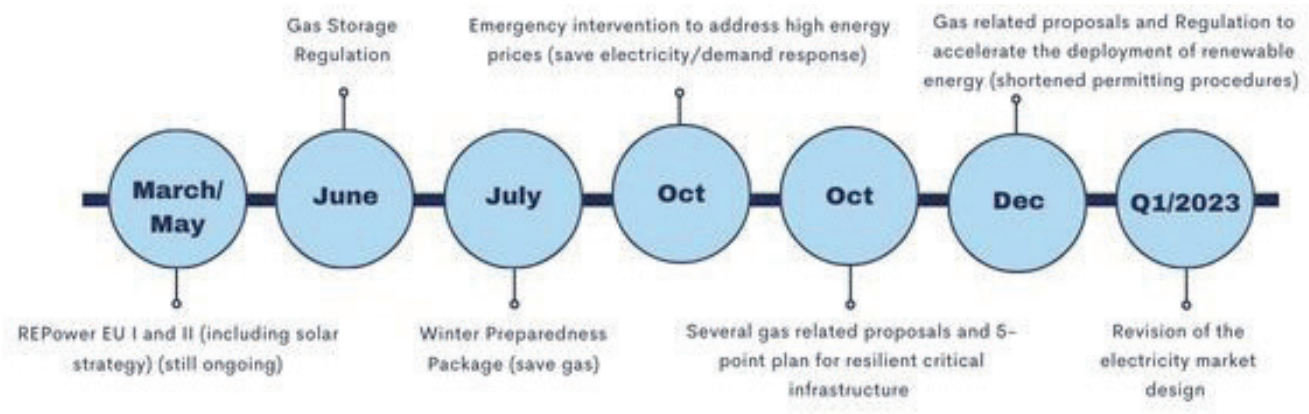


Illustration 3.2: Unplanned EU emergency activities in 2022/23[10]

In addition to these emergency measures, long-awaited initiatives were finally published in late 2022 such as the **Digitalisation of the Energy System Action Plan**. In this, the European Commission emphasised once again that the objectives of the European Green Deal will not be met without the digitalisation of the energy system. The plan sketches out the Commission's strategy to create a digitalised, green and resilient energy system and stresses the need for significant investment, especially in electricity infrastructure, of more than €560 billion by 2030. The Action Plan includes several topics that are highly relevant to DSO Entity's key workstreams, especially in cybersecurity, distributed flexibility, data interoperability, consumer engagement and investments (smart grid indicators, digital twin). The digitalisation and smartening of the grid, including the installation of smart meters, are seen as prerequisite for reaching other goals such as empowering consumers. In this respect, Member States with a negative cost-benefit analysis for the roll-out of smart meters were requested to re-evaluate their decision.

In summary, it is clear that 2022 has accelerated developments for more decentralisation and electrification of the energy system, which were already induced by the Fit for 55 Package. On the one hand, European regulatory activities aim to counter the crisis, while on the other hand high energy prices encourage consumers to turn to self-production in the form of decentralised and renewable solutions. All these developments highlight the **increasingly important role of DSOs** in realising decentralised renewables, empowering consumers, smartening the grid and facilitating distributed flexibility (illustration 3.3).

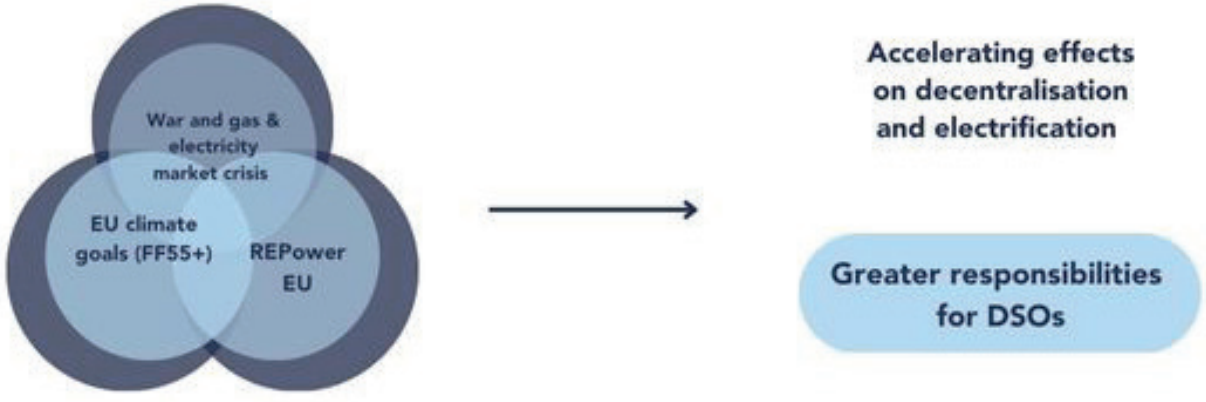


Illustration 3.3.: Accelerating effects on decentralisation and electrification in 2022

10. References for illustration: Regulation (EU) 2022/1032 of 29 June 2022 on gas storage, Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices

DSOs as (technical) enablers to accelerate the realisation of the EU's climate objectives

Illustration 3.4 shows how the successful implementation of the European objectives is closely interlinked with the daily (technical) work of DSOs and why the latter are vital for their achievement. High-level political objectives will only be achieved if the technical preconditions in the system and market are right. As a result, technical bodies are pivotal for enabling and facilitating the transition. In recent years, decision-making at the European level has become more technical, which can be seen in an increase of implementing and delegated acts. This more technical-driven political environment highlights the growing relevance of technical expert bodies such as DSO Entity to help solve political problems. In the end, all political questions require technical answers.

The DSO Entity work programme is geared towards supporting the EU's objectives with respect to the creation of a cyber-resilient, digitalised, renewable, decentralised and decarbonised energy system. This goes hand in hand with DSO Entity's mandate to participate in the development of network codes, intensify the cooperation with TSOs and share best practices on distribution networks.

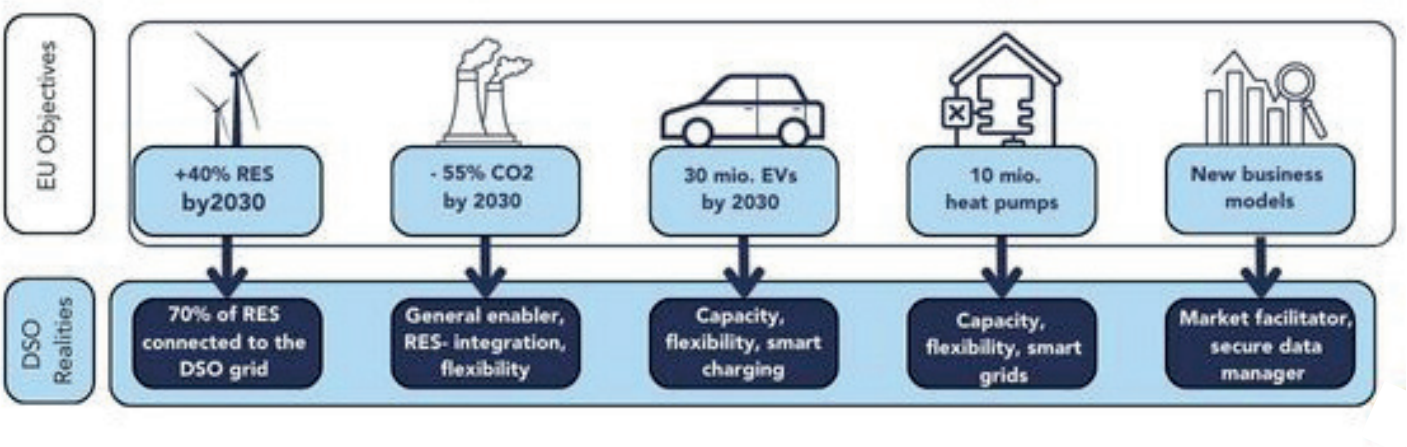


Illustration 3.4: DSOs as enablers of the EU's climate objectives[11]

11. 70% of RES refers to the installed renewable capacity: Sources: https://www.eurelectric.org/connecting-the-dots/. For further references see references for Illustration 3.1.

At a first glance, the broader political initiatives and measures described above might seem detached from the daily work of DSO Entity, but they are actually closely linked and important to monitor. In 2022, the immediate repercussions of the broader political developments on the activities of DSO Entity and its Expert Groups were clear to see. The two examples below, on the topic of cybersecurity (EG Cybersecurity) and demand side flexibility (EG Distributed Flexibility), exemplify this "trickle-down effect" of broader European developments on the work of DSO Entity and its Expert Groups.

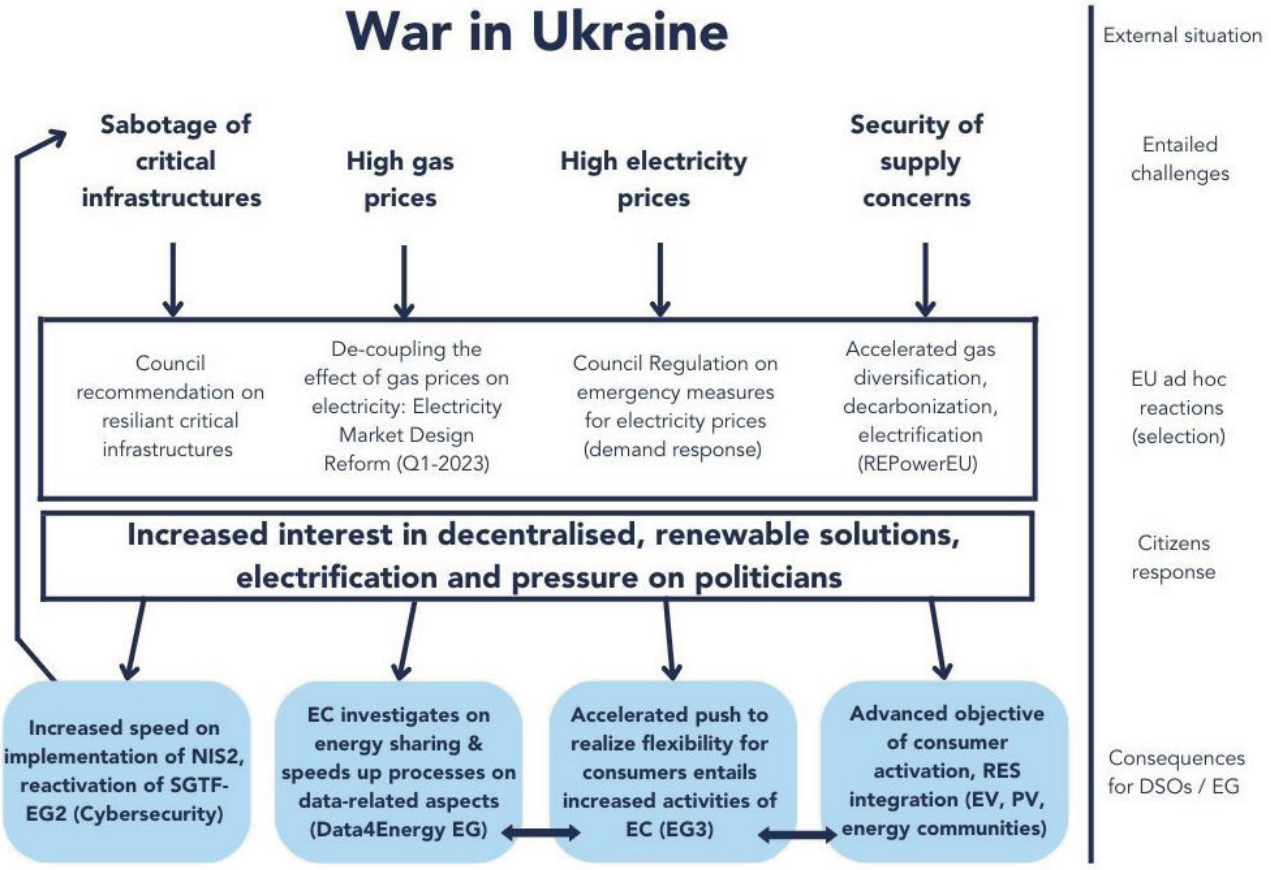


Illustration 3.5. The trickle-down effect: a myth in economics, the truth in EU-policies

Example: Expert Group Cybersecurity

The Russian war in the Ukraine and (cyber) attacks on critical (energy) infrastructure alerted the European Commission's attention to the importance of the resilience of its own critical (energy) entities. This resulted in a variety of initiatives, such as the proposal for a Council recommendation on a 5-point plan for resilient critical infrastructure in October. The draft recommendation aimed to maximise and accelerate the work to protect critical infrastructure in three priority areas: preparedness, response and international cooperation. Alongside a better-coordinated European approach, the Commission advised EU Member States to accelerate implementation of the Directive on measures for a high common level of cybersecurity across the Union (NIS2) and the Directive on the resilience of critical entities[12]. This request was mirrored in the European Council conclusions several days later. Also in autumn 2022, the Commission published its proposal for a Cyber Resilience Act (CRA)[13], an initiative which had been even longer in planning, and which is still under legislative scrutiny. This focuses on the cybersecurity aspects of hardware and software by laying down harmonised cybersecurity rules for placing products with digital elements on the EU market. It is obvious that all these activities relate to ongoing work on the Network Code Cybersecurity (NCCS) and the work of DSO Entity's Cybersecurity Expert Group. Alongside these more content-related activities, the Commission also revived and strengthened existing expert bodies, including the resurrection of Expert Group 2 on Cybersecurity of the Smart Grids Task Force (SGTF-EG2). Previously, SGTF-EG2 had played an important role in preparing the groundwork for the NCCS, but it has remained dormant since 2018. A revived SGTF-EG2 resumed work in early 2023 and DSO Entity is represented on it by two of its distinguished experts from the Cybersecurity Expert Group.

Example: Expert Group Distributed Flexibility

In the light of growing fears about gas shortages and insecurity of supply, new proposals for gas and electricity saving/optimisation measures were published. In October 2022, the Council Regulation on emergency intervention to address high energy prices in electricity sector was adopted. The regulation strengthened the objective to optimise energy use through demand response by introducing a temporary obligation for Members States to reduce electricity demand during peak hours. To support the successful implementation of these measures in Members States, the Commission started to prepare a guide with short- medium- and long-term measures to optimise energy use, as well as showcasing flexibility solutions that already existed. This report was developed by Expert Group 3 of the Smart Grids Task Force (SGTG-EG3) of the European Commission, together with external stakeholders including experts from DSO Entity's Distributed Flexibility Expert Group[14]. SGTF-EG3's focus and expertise is on topics such as demand side flexibility, demand response and 'consumers flexibility'. The crisis in 2022 highlighted the need for fast deployment of flexibility solutions, including for end-consumers. Hence the importance of the work of DSO Entity and ENTSO-E in developing the Network Code on Distributed Flexibility.

12. Directive (EU) 2022/2555 of 14 December 2022 on measures for a high common level of cybersecurity across the Union (NIS 2 Directive); Directive (EU) 2022/2557 of 14 December 2022 on the resilience of critical entities
13. EC Proposal for a Regulation on horizontal cybersecurity requirements for products with digital elements and amending Regulation 2019/1020 (COM(2022)454).
14. SGTF-EG3 - Work Stream Consumers' Empowerment: Paper on electricity demand reduction: Measures to mobilise consumers' flexibility this winter and beyond. November 2022 (add reference when published online)

The next Chapter on the internal developments of DSO Entity provides more detail on the work of the Expert Groups in the light of European developments.

3.2. DSO Entity in the making: internal developments

2022 marked DSO Entity's first full year of activity since its establishment in June 2021. The association came under close scrutiny, in the context of an intense regulatory agenda with the development of new network codes and guidelines. DSO Entity launched major actions and projects in 2022 to implement its governance and be recognised as a fully-operational platform of expertise at the European level.

Achievements in 2022: Implementation and establishment of three core work-streams

According to the Electricity Market Regulation (2019/943/EU), DSO Entity is mandated to carry out several main tasks. Of these, DSO Entity is particularly focused on developing network codes, cooperating with the TSOs and sharing best practices. During its first year of operation, a number of significant achievements were made on the first two key activities and significant steps were taken to conceptionalise and organise internal work on the association's third main task.

Illustration 3.6.: The three core workstreams of DSO Entity

1. Development of Network Codes and Guidelines

In accordance with Articles 59 and 60 of Electricity Market Regulation (2019/943/EU), DSO Entity worked within its Expert Groups to develop new network codes and to propose amendments on the existing network codes. According to Article 1 of the Priority List Implementing Decision (2020/1479/EU) of the European Commission[15], new harmonised electricity rules are needed on cybersecurity and demand-side flexibility. These two new network codes were therefore at the core of DSO Entity's activities in 2022.

- In January 2022, six months after its establishment, DSO Entity successfully delivered a draft proposal of the Network Code on Cybersecurity, together with ENTSO-E, to contribute to maintaining the security and resilience of the electricity system across Europe.
- DSO Entity experts also started work on the Framework Guidelines on demand response and on the Implementing Regulations on data interoperability and access by responding to the European Commission's public consultations in 2022, so building the foundations for its work in 2023.
- In close cooperation with ACER, DSO Entity was also involved in the process of amending existing network codes, in particular the Network Code on Grid Connection, specifically the Requirements for Generators (RfG) and Demand Connection (DC), by providing expert responses to two public consultations opened by ACER in 2022.

15. Implementing Decision 2020/1479 of 14 October 2020 establishing priority lists for the development of network codes and guidelines for electricity for the period from 2020 to 2023 and for gas for 2020

Article 55 of the Electricity Market Regulation (2019/943/EU) states that one of DSO Entity's main tasks is to adopt best practices on the coordinated operation and planning of transmission and distribution systems. In accordance with this mandate, DSO Entity was assigned to work with ENTSO-E on two joint initiatives: on the Digital Twin and Smart Grid Indicators as provided by the Action Plan on the Digitalisation of the Energy System and the Ten Year Network Development Plan (TYNDP). Two task forces were established to work on these assignments and the first steps were initiated in the second half of 2022.

2. Strengthening cooperation between TSOs and DSOs:

The close cooperation with ENTSO-E (as described above) is one of DSO Entity's core mandated tasks. 2022 marked the first year of intensive cooperations on a variety of initiatives. From its very beginning, DSO Entity was committed to setting up the necessary conditions to cooperate with ENTSO-E on an equal footing and guarantee regular exchanges on related TSO-DSO topics.

- In January 2022, DSO Entity and ENTSO-E signed a Memorandum of Understanding (MoU), a key milestone for the cooperation between the two associations.
- As a next step, DSO Entity and ENTSO-E developed a Joint Work Plan for 2022-2023, a working level document listing joint priorities and concrete actions where TSOs and DSOs can work together in during the two first years of cooperation.
- DSO Entity established a TSO-DSO Board Committee dedicated to working on joint initiatives with ENTSO-E. The secretariats of the two associations have also ensured regular contacts and meetings to exchange information on common projects as well as updates on their respective activities.
- DSO Entity was also invited to share its vision and perspective on the Vision for a Power System for a Carbon Neutral Europe, developed by ENTSO-E, at their annual conference in October 2022.

Furthermore, DSO Entity and ENTSO-E successfully cooperated on the **development of network codes** in 2022. A fruitful cooperation between the experts of the two associations resulted in a first draft proposal of Network Code on Cybersecurity in January 2022, which was submitted by ACER to the European Commission in July 2022. In the second part of 2022, DSO Entity and ENTSO-E's experts also initiated discussions on the topic of distributed flexibility[16] and started building the Development Team to be in charge of drafting the upcoming network code and collaborate with external stakeholders within the Drafting Committee. In addition, TSO and DSO experts and secretariats began to work together on the topic of data interoperability. In particular, this involved building a Joint Working Group that the European Commission asked DSO Entity and ENTSO-E to establish to monitor and implement the reference models as well as further elaborate any subsequent reference models[17]. DSO Entity and ENTSO-E also collaborated on the amendment of existing network codes through bilateral exchanges, in particular the Network Codes on the Grid Connection.

Beyond the joint work on developing network codes, DSO Entity and ENTSO-E worked together on other bilateral initiatives, such as the Digital Twin and Smart Grid indicators. The cooperation was formally launched on 20 December when a Declaration of Intent[18] was signed between the two associations in the presence of Energy Commissioner Kadri Simson.

16. DSO Entity and ENTSO-E developed a joint statement on the draft Framework Guidelines on demand response proposed by ACER and submitted to a public consultation opened until June 2022. The joint statement presents initial shared points between TSOs and DSOs on the proposal made by ACER, in view of the future joint work on the upcoming network code on distributed flexibility.
17. The European Commission mandated DSO Entity and ENTSO-E in its draft Implementing Regulation on the electricity metering and consumption data.
18. https://www.eudsoentity.eu/media/445ehrpe/221220_draft-press-release-digital-twin-event_final.pdf

3. Sharing knowledge and best practices

In accordance with Article 55 (2c) of the Electricity Market Regulation (2019/943/EU), DSO Entity also works on identifying best practices. In the second half of 2022, DSO Entity established the necessary internal conditions to share knowledge and collect expertise among its DSO members beyond the limited topics of network codes, in order to address relevant topics on the distribution grids. In December 2022, the Board of Directors approved the launch of knowledge sharing activities as part of DSO Entity's portfolio of tasks and agreed to entrust the Communication Board Committee (CBC) to be in charge of it, in close cooperation with the Board. The implementation of knowledge sharing activities is planned for 2023 (see related 4.2.).

In Q4 2022, DSO Entity surveyed its members to collect their views on the topics they would like to learn more about, or share information about with other members, as well as to identify the key topics they thought should be the focus of DSO Entity's knowledge sharing activities in 2023 (see more details in section 4.2.). These priority topics are to be collected in an internal strategy of knowledge sharing and communication, to be prepared annually by DSO Entity in the future.

Building presence and credibility as a platform of expertise in Brussels

In 2022, DSO Entity developed and approved its first **Communication Strategy** aiming to build its presence and credibility as "platform of expertise" in Brussels. With the support of the Communication Board Committee, DSO Entity implemented its Communication Strategy by adopting a visual identity, intensifying its activities on social media and building relations with external energy stakeholders, thereby building its reputation in the EU landscape. The results are reflected in the **different interventions of DSO Entity in external events and conferences** such as the Florence and Dublin Forums, the European Sustainable Energy Week and several more. DSO Entity was also represented at events organised by non-institutional European energy stakeholders such as respective ENTSO-E and CEER's conferences, smartEn conference and Enlit 2022. DSO Entity experts also worked with the Florence School of Regulation, sharing their expertise on distribution grids as part of the school's courses. Throughout the year, DSO Entity not only cooperated with external experts via formal channels, but also through bilateral exchanges and initiatives. Increasing numbers of exchanges with the European Commission, ACER, CEER and other European energy stakeholders attest to a growing recognition of DSO Entity's role, and speaks to the high expectations of the association in sharing its expertise, knowledge and best practices of DSOs.

Beyond the expertise gathered internally, DSO Entity's experts also represent the association and share expertise and knowledge externally, in particular, in expert groups established by the European Commission. An example is the Smart Grids Task Force (SGTF) and its subgroups (see Box). DSO Entity is well represented on the SGTF, to be renamed 'Smart Energy Expert Group', and will integrate a new working group 'Data for Energy (D4E)' to be set up by March 2023, as provided by the Action Plan on the Digitalisation of the energy system. The SGTF will have greater responsibilities and involve all Member States and additional relevant stakeholders.

Smart Grids Task Force of the European Commission:

DSO Entity delegates experts to the following European Commission expert groups, providing expertise on behalf of DSO Entity on topics which are part of the association's mandate:

Expert Group 1 ('SGTF-EG1') of the Smart Grid Task Force

which is mandated to develop the implementing regulations that further defines data interoperability requirements and procedures as stated in Articles 23 and 24 in Electricity Market Directive (EU) 2019/944[19]. One DSO Entity representative sits in the SGTF-EG1 and three experts are involved in the workstreams of the Phase II[20] of the work of the SGTF-EG1.

Expert Group 2 ('SGTF-EG2') of the Smart Grid Task Force

which is mandated to provide recommendations and guidance on cybersecurity-related aspects of the energy systems. EG2 played an important role in preparing the groundwork for the Network Code Cybersecurity but had remained dormant since 2018. In 2022, it was reactivated and took up its work in January 2023[21]. DSO Entity is represented by two experts in the SGFT-EG2.

Expert Group 3 ('SGTF-EG3') of the Smart Grid Task Force

to provide recommendations on the future roles and responsibilities for the deployment of smart grids, with subsequent focus on the topics of demand side flexibility and explicit demand response. It was set up in 2010 and was requested to pursue its work in 2019 with a new activity on 'consumers flexibility' to add to its initial mandate, in line with the new binding climate objectives of the EU set in the European Climate Law. The subgroup EG3 also aims to explore the potential of the digitalisation of the energy sector in line with the priorities of the Europe fits for digital age and the new Consumer Agenda[22]. DSO Entity is represented by one expert in the SGTF-EG3 3.3.

19. European Commission (2022). "Terms of reference of the EG1 group, Phase II".
20. The SGTF-EG1 entered in the second phase of its work to elaborate and draft a proposal of Implementing Regulation on the Data for Switching and Demand Response, in close cooperation with the development of the upcoming Network Code on Distributed Flexibility
21. European Commission (2022). "Terms of reference of the Expert Group 2 – Cybersecurity".
22. European Commission (2022). "Terms of reference of EG3 subgroup - Regulatory recommendations for smart grid deployment: work stream consumers' empowerment".

3.3. Progress overview of the Expert Groups

As mentioned in Chapter 2.2, the Expert Groups are essential to DSO Entity's three pillars of work. The tables below provide a more specific overview of the Expert Groups' work in 2022 under all three pillars. Since some of the Expert Groups were only established in Q3-Q4, their work focused primarily on formalities, such as electing chairs and vice-chairs, preparing and adopting Terms of References (ToR) and sketching out the scope for their future workstreams and cooperations.

EXPERT GROUP – CYBERSECURITY
FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
March 2022	24	16

- **Core activity and mandate**: Network Code Cybersecurity

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Submission of the draft NCCS (01/22) • Response to ACER's public consultation (05/22) • Preparation of the Terms and Conditions and Methodologies (TCMs) in subgroups • Response to Commission's consultation on the Cyber Resilience Act (CRA) on related aspects to NCCS (12/22)	• Monthly project team meetings since May 2022 • Intensive cooperation in the project team subgroups; frequency depending on each subgroup, from weekly to monthly	• Official exchanges / regular contacts with ACER, ENISA, ENCS, and EE-ISAC on NCCS and related aspects • Representation of two experts in the Smart Grids Task Force Expert Group 2 on Cybersecurity

EXPERT GROUP – DISTRIBUTED FLEXIBILITY (EG DF)
FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
March 2022	30	18

- **Core activity and mandate**: Network Code Distributed Flexibility
- **Relevance for DSO (members)** : Create foundations for flexibility market that unlocks the value of consumer participation in the sustainable energy system

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Response to ACER's consultation on the draft Framework Guidelines on Demand Response (08/22) • Preparation of work on the upcoming Network Code on Distributed Flexibility (scheduled for Q4) • Development of key messages on distributed flexibility (Q3-Q4)	• Joint statement on ACER's draft Framework Guidelines on Demand Response (08/22) • Composition and informal start of the Development Team in charge of drafting the upcoming Network Code on Distributed Flexibility (11-12/22)	• Representation of one expert in the Smart Grids Task Force Expert Group 3 on Demand Response • Exchanges with other energy stakeholders relevant for distributed flexibility, such as smartEn

EXPERT GROUP – DATA INTEROPERABILITY (EG DI)

FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
May 2022	19	10

▶ **Core activity and mandate**: Implementing Regulations related to data interoperability (electricity metering and consumption data and data for switching and demand response)

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Response to DG ENER's consultation on the draft Implementing Regulation on electricity metering and consumption data (09/22) • Coordination with the work done in SGTF-EG1 on Data Access and Interoperability on the future Implementing Regulation on Data for Switching and Demand Response (regular basis) • Considerations on the establishment of the Joint Working Group with ENTSO-E (09-12/22)	• Preparation of the establishment of the Joint Working Group with ENTSO-E, as mandated by the Implementing Regulation on the Electricity metering and consumption data (11-12/22) • Considerations of a cooperation on the IEC CIM	• One representative in the Smart Grids Task Force Expert Group 1 on Data Interoperability and three experts in the workstreams of STGF-EG1 on the elaboration of the future Implementing Regulation on Data for Switching and Demand Response (starting in Q3) • Considerations regarding a possible cooperation with ebIX • Elaboration on an internal position on submetering (09-12/22)

TASK FORCE – DIGITALISATION OF THE ENERGY SYSTEM: ACTION PLAN (TF DESAP)

FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
October 2022 (Kick off)	20	13

▶ **Core activity and mandate**: Creation of a Digital Twin and support for Smart Grids Indicators as stated in the DESAP (COM(2022)552/2 and SWD(2022)341)

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Development of a first common understanding of the task to create a Digital Twin together with ENTSO-E and to support the work on Smart Grid Indicators • Debate on possible future engagement of DSO Entity in Horizon funding • Launch of organisational aspects such as the election of chairs and vice-chairs	• Launch of informal meetings between experts and preparation of the Declaration of Intent (DoI) • Signing ceremony with Energy Commissioner Kadri Simson on the Declaration of Intent (12/2022)	

TASK FORCE – TEN YEAR NETWORK DEVELOPMENT PLAN (TF TYNDP)

FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
December 2022 (Kick off)	16	11

▶ **Core activity and mandate**: Work TYNDP with ENTSO-E

Core activity	DSO-TSO cooperation	Knowledge Sharing
• In-person kick-off meeting to define future workstreams and activities • Launch of organisational aspects such as the election of chairs and vice-chairs	• Start of exchange with ENTSO-E on future cooperation on TYNDP • Joining ENTSO-E workshop on scenario building with the Energy Transition Model	• Attendance at several European Commission workshops on related aspect with TEN-E / Regional groups

EXPERT GROUP – EXISTING NETWORK CODES (EG EXNC)

FACTSHEET 2022

Date of establishment	Number of experts	Number of countries
October 2022 (Kick off)	21	14

▶ **Core activity and mandate**: Work on amending existing network codes (Connection, Market, Operation)

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Response to ACER's consultation on the existing Network Codes on Request for Generators (RfG) and Demand Connection (DC) NCs (11/22)[23] • Launch of organisational aspects, such as the election of chairs and vice-chairs	• Several formal and informal exchanges with ENTSO-E	• Presentation of DSO Entity's initial views on the amendments to the Grid Connection Network Codes during ACER's public workshop in Ljubljana (10/2022)

23. This response is in line with a previous response from June 2022 in which DSO Entity responded to ACER's consultation on the main topics to be under radar for further amendments. The response was prepared by a preliminary format of Expert Group.

4. LOOKING AHEAD TO 2023:

EXTERNAL DEVELOPMENTS TRANSLATED INTO WORK PROGRAMME

This Chapter describes the anticipated external developments that have a potential impact on the work of DSO Entity, as well as its core work programme based on its mandated tasks. The internal work programme is introduced by a brief outline of the activities in the three pillars of DSO Entity: Network Code development, DSO-TSO cooperation, and knowledge sharing. In addition, the concrete work plans of the Expert Groups are described in greater detail.

4.1. Navigating through an unknown energy future: external environment

2023: the European year of decisions

The events of 2022 were a stark reminder that the only thing predictable about the future is its unpredictability. Despite the many uncertainties about forthcoming developments, especially in the energy sector, there is clarity about one thing: 2023 will be a crucial and decisive year in EU decision-making on central energy files and it will further accelerate the trajectory towards a renewable and decentralised energy system in which DSOs will have a key role, being the last part of the energy chain connecting to consumers.

2023 is expected to bring political agreements on more than a dozen energy- and climate-related files that are currently under negotiation (see legislative timeline). In particular, agreement is expected on highly relevant FF55 files such as the Renewable Energy Directive, the Energy Efficiency Directive, the Alternative Fuels Infrastructure Regulation, the Renewable Gases and Hydrogen Market Regulation/Directive, as well as on separate environmental files such as the F-Gas Regulation[24]. The impact of this "mammoth" legislative package", launched almost two years ago, will soon be felt in national capitals. The completion of a legislative file at European level only marks its beginning at the national level. The EU's legislative objectives will need to be transferred into concrete measures on the ground and implemented at the local level. This is where DSOs will play a crucial enabling role.

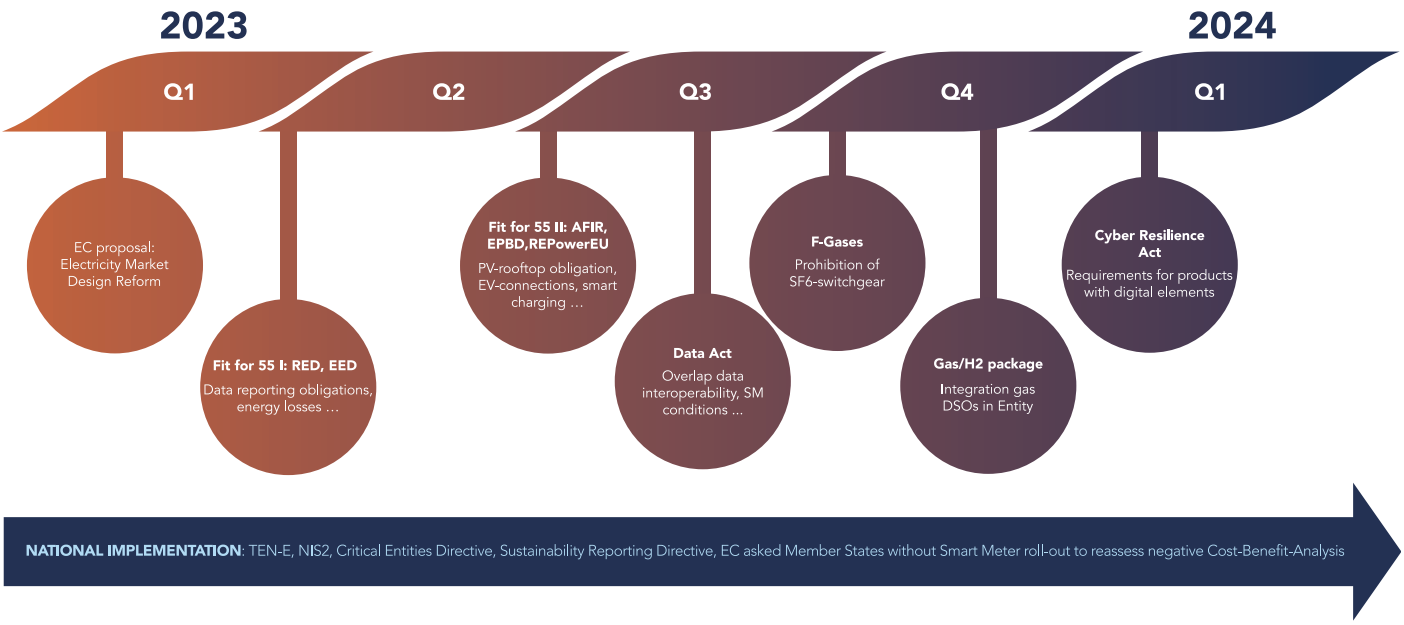


Illustration 4.1. Estimated timeline for the finalisation of central files in 2023

24. Regulation (EU) 517/2014 of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Alongside these mainly climate-related files, a proposal to reform the electricity market design was announced for March 2023. It will be addressed via a legislative fast-track procedure, aiming for an agreement in the summer. The degree and scope – and therefore the relevance for DSOs – remains to be seen. In general, adaptions affecting the functioning of the electricity market design are certainly relevant to developments of the Network Code Distributed Flexibility and the future role of DSOs in flexibility markets.

The reason behind this huge wave of EU legislation development and decisions in 2023 is not just down to the energy upheavals of 2022, but must primarily be seen because the current legislative period is approaching its end. A new European Parliament will be elected in May 2024, which means that the last legislative plenary votes will occur in early 2024. All files on which no agreement could be reached will have to wait for the new institutional set-up in autumn 2024.

The relevance of general European developments for DSO Entity:

The immediate effects of more general European activities on the work of DSO Entity and its Expert Groups were illustrated in Chapter III. DSO Entity will therefore continue to monitor, inform and discuss with its members general European developments. The illustration below shows the connection between the core tasks of DSO Entity and general legislative developments. The differently shaped icons indicate potential overlaps and interactions between the more general and technical files.

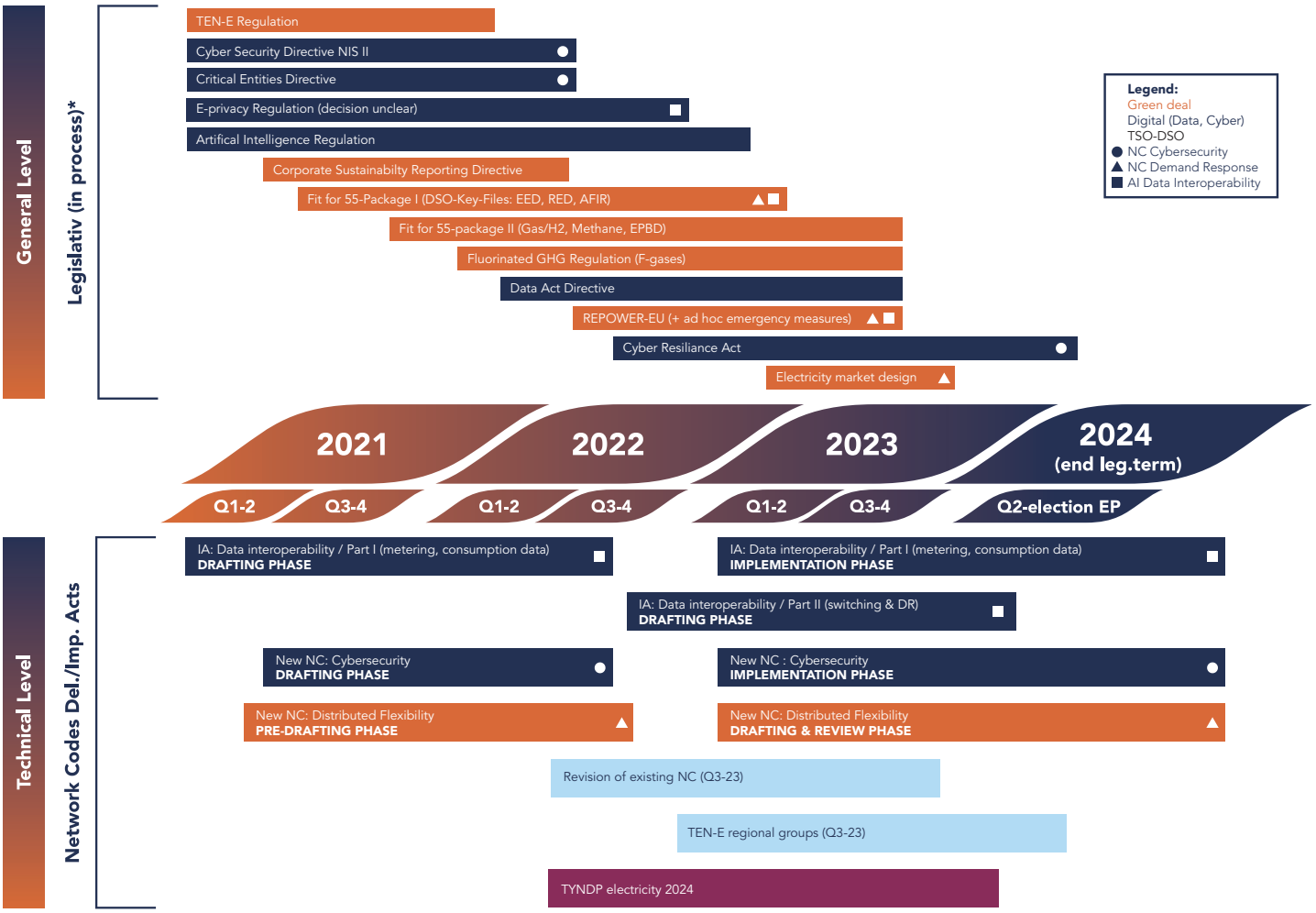


Illustration 4.2. Timelines general legislation and Network Codes

To structure the overview of topics relevant for DSO Entity, they have been divided into four thematic clusters. These clusters are organized along existing core European Commission Strategies. This is because the origins of almost every single initiative can be traced back to a broader European Strategy (illustration 4.4.). For example, most of the FF55-files, such as the revision of the Renewable Energy Directive, emanated from the European Green Deal Strategy which was formulated by Climate Commissioner Frans Timmermans in December 2019 shortly after the new Commission took office. The EU Green Deal sketched the Commission's key policy priorities for its upcoming mandate and already explicitly named the files to be reviewed. All of the topics in one cluster are related to the core work of the Expert Groups and DSO Entity's mandated tasks (see illustration 4.4.)

To give additional context, in Annex I the origins and the developments in these different areas are described in greater detail sketching the current status quo and expectations for 2023.

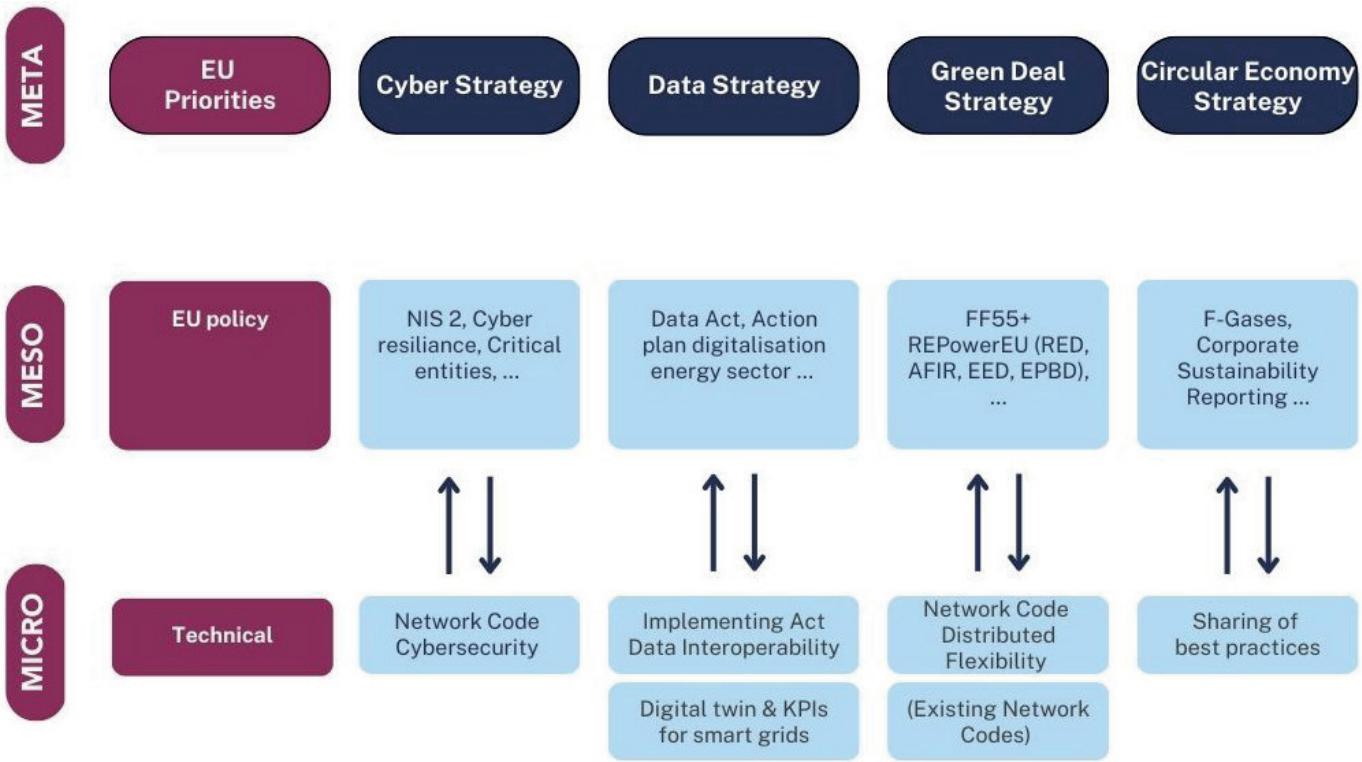


Illustration 4.4. The relationship between broad EU Strategies and technical Expert Groups
(For a detailed description of the four key-policy areas see annex I)

From Strategy to Policy – how EU policies are made

The origins of almost all individual initiatives can be tracked back to broader European strategies from which they emanate.

Illustration 4.5. From Strategy to Policy

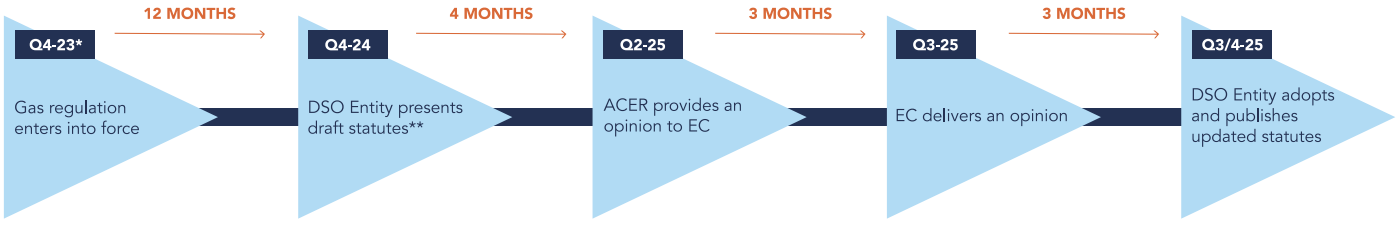
Example

The latest example is the Solar Strategy (COM 2022/221) which was published in May 2022 and is in line with the broader EU Green Deal objectives. In this Strategy, the Commission describes its ambition to ensure that solar energy can reach its full potential in helping to achieve the EU Green Deal's targets. Based on these strategic goals, more concrete legislative proposals followed in the form of an obligation to install rooftop solar panels on every new building in future as part of the Energy Performance of Buildings Directive (reference). In addition, there is also a Council Regulation for the acceleration of the permitting procedures for the installation of PV solar (2022/2577/EU). The mandate of DSO Entity encompasses the "facilitation of the integration of renewables" (Art. 55), and so initiatives on the roll-out and connection of PV solar have links with the work of several of DSO Entity's Expert Groups dealing with related aspects. Also sharing best practises in this area can be highly beneficial.

Relevant development for DSO Entity per se

Besides the four thematic clusters, certain legislative European developments need to be closely monitored since they are relevant for the structure and governance of DSO Entity per se. In its review and revision of the Gas Regulation (715/2009/EC) from December 2021, the European Commission proposed the integration of gas DSOs in the current DSO Entity structure. The draft Regulation is still under negotiation between the European Parliament and the Council but the co-legislators seem inclined to follow the Commission's proposal with respect to an integrated Entity including electricity, gas and potentially even hydrogen DSOs. A decision is expected in Q3-4 2023.

This development, if it comes into effect, would necessitate a substantial overhaul of the current DSO Entity structure and governance. The current draft Regulation foresees that within one year after its entry into force revised statues, rules of procedures and financing rules, must be submitted to the Commission. The timeline below shows the anticipated implementation process for the new structure based on the text of the draft Regulation. Given the centrality of such a change, these developments are being closely monitored and preparatory steps are due be taken in due course.



* estimated date
** incl. a code of conduct, a list of registered members, updates rules of procedure and financing rules

Illustration 4.6. Timeline for the integration of gas DSOs (according to EC proposal)

4.2. Strategic priorities for DSO Entity's core workstreams

2023 will be a year of opportunities and challenges for DSO Entity. Together with its experts, it will continue to fulfil its tasks according to its mandate in the Electricity Market Regulation (2019/943/EU) and assume new obligations upon request from the European Commission and in response to EU regulatory developments. In the context of an energy crisis which is expected to continue in 2023, with exacerbated effects for industries and consumers, the energy transition will accelerate, supported by the digitalisation of the energy system – and the mandate of DSO Entity will therefore become more relevant than ever.

According to Article 55 of the Electricity Market Regulation (2019/943/EU), DSO Entity is responsible for facilitating the integration of renewable energy sources, distributed generation, and other resources in the distribution network, contributing to the digitalisation of distribution systems, supporting the development of data management, cyber security and data protection, and developing network codes. All these tasks are essential conditions for the EU's response to the energy turmoil and the role of DSO Entity will be key to providing technical answers to more politically-driven questions.

With an established and balanced governance, as well as more than 130 experts, DSO Entity has an ambitious programme for 2023 and is committed to fulfilling its mandate and providing the expertise and vision of the European distribution grids operators.

Activities in the three main workstreams

DSO Entity will continue working on its three core mandated workstreams: (1) the development of network codes, implementing acts and ancillary/connected mandated tasks; (2) cooperation with TSOs/ENTSO-E; and (3) sharing of best practices both internally and externally, so contributing to reaching the European Climate objectives.

1. Developing, amending and implementing network codes, guidelines and implementing acts

According to Article 1 of the Priority List Implementing Decision (2020/1479/EU) of the European Commission[25], new harmonised electricity rules are needed on cybersecurity and demand-side flexibility. As they were in 2022, these two new network codes will continue to be key priorities for DSO Entity in 2023.

- **The implementation of Network Code Cybersecurity (NC CS)**: After the adoption of the Delegated Act on the NC CS by the European Commission in early 2023, DSO Entity and ENTSO-E will start with the comprehensive implementation works, which encompass the driving of the "risk analysis cycle" and the preparation and consultation of technical TCMs (Terms Conditions and Methodologies).
- **The development of the Network Code Demand Response (NC DR)**: After the submission of ACER's Framework Guidelines to the European Commission in December 2022, DSO Entity and ENTSOs-E are expected to get assigned to draft a proposal for the new binding rules and to submit it to ACER within the 12 months following the request (expected in mid-February 2023) based on Article 59(9) of the Electricity Market Regulation (2019/943/EU) in Q1.

25. Implementing Decision 2020/1479 of 14 October 2020 establishing priority lists for the development of network codes and guidelines for electricity for the period from 2020 to 2023 and for gas for 2020

In the framework of the Grid Connection European Stakeholder Committee, the European Commission proposed that ACER initiates the process to amend the existing European NC GC in September 2022.

- **The amendment of existing Network Codes**: DSO Entity will continue to work on the amendment of the Grid Connection Network Codes (NC GC), in particular on the Requirements for Generators (RfG) and Demand Connection (DC). There is also the possibility of amendments being required for the Network Codes on Market and System Operation.

Based on Article 23 and 24 of the Electricity Directive (2019/944/EU), the European Commission (SGTF-EG1) has for several years been working on **Implementing Regulations for interoperability requirements** and non-discriminatory and transparent procedures for **access to data**, resulting in an implementing regulation in Q1 (part I) and the continuation of further works in SGTF-EG1 (part II). In 2023, DSO Entity will be actively supporting the Commission in both processes.

- The Implementing Regulation on the Electricity metering and consumption data will provide for DSO Entity and ENTSO-E to set up a Joint Working Group[26]. The Joint Working Group is responsible for monitoring the implementation of reference role models for data interoperability, developing guidance for Member States and collecting best practices, which shall then be made publicly available in a (digital) repository.
- The drafting process of part II of the Implementing Regulation on data required for switching and demand response is ongoing under the mandate of SGTF-EG1 in which DSO Entity is represented through its experts.

Article 57 (1) and Article 55 (2b) of the Electricity Market Regulation (2019/943/EU) require cooperation between DSO Entity and ENTSO-E in **planning and operating their networks and adopting best practices**. Moreover, Regulation (EU) 2022/869 on guidelines for trans-European energy infrastructure identifies DSO Entity as a party which must participate in the scenario development process of the **Ten-Year Network Development Plan (TYNDP)**[27]. The TYNDP is a pan-European long-term vision for the power energy system, adopted every two years and central for the development of electricity network infrastructure in Europe.

- A close cooperation will be established with ENTSO-E on the development of TYNDP scenarios and planning to share the vision and expertise of European distribution network.

In the EU Action Plan Digitalision of the Energy System of October 2022 (DESAP), the European Commission entrusted DSO Entity and ENTSO-E with developing a 'Digital Twin' of the European electricity grid and to provide guidance and support for network operators on sustainable and cost-effective smart investments via the development of a tailored set of "Smart Grid Indicators" (SGI).

- DSO Entity and ENTSO-E will set up a common Task Force to work on the development of a Digital Twin and work in close collaboration with the regulatory authorities on Smart Grid Indicators which will help foster investments in smartening the grid for enhanced capacity and flexibility, geared to empowering consumers to take part in energy transition.

26. Article 12, Paragraphs 1 and 2 of the Implementing Regulation [number to be added once published] of [Date of publication] on the electricity metering and consumption data

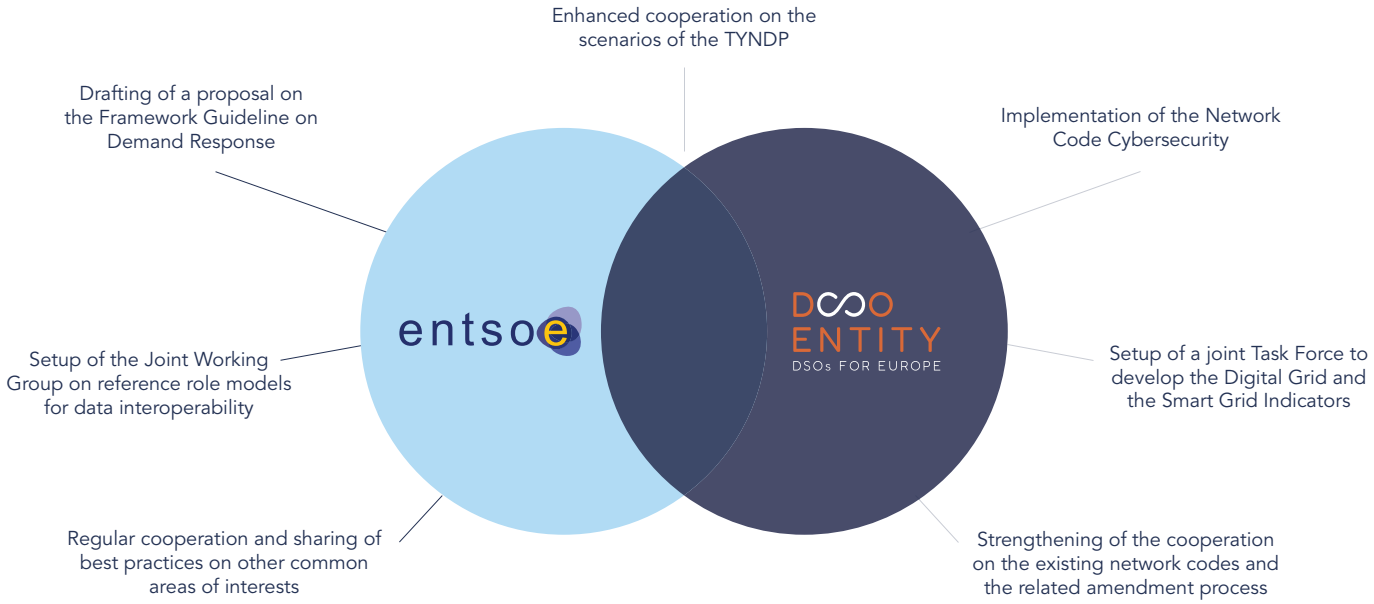
27. Under Article 12 of the TEN-E Regulation (2022/869/EU).

2. Strengthening cooperation with ENTSO-E and joint initiatives between TSOs and DSOs

In January 2023, the Memorandum of Understanding signed between DSO Entity and ENTSO-E, a milestone of the cooperation between TSOs and DSOs, celebrated its first anniversary. The increased joint tasks requested of the two associations by the European Commission only point in one direction.

2023 will mark a year of increasing coordination and cooperation between European energy networks. DSO Entity and ENTSO-E will have many opportunities to pursue and increase their cooperation on various areas of interest to TSOs and DSOs. All DSO Entity's Expert Groups and Task Forces work in close cooperation with ENTSO-E, as described in the section above.

Therefore, below we provide a brief overview of the ongoing cooperative formats between DSO Entity and ENTSO-E:



3. Implementing the knowledge sharing workstream

Article 55 (2c) Electricity Market Regulation (2019/943/EU) mandates DSO Entity with "identifying best practices" in core areas of its expertise, such as planning of distribution networks, facilitating the integration of RES and demand side flexibility, contribution to the digitalisation of the grid, supporting cybersecurity and data protection. To achieve this, in 2023, DSO Entity will continue to establish and implement this third pillar of Knowledge Sharing.

For DSOs in particular, which are many and diverse throughout Europe, the sharing of best practices and expertise can play an essential role in contributing to achieving Europe's energy transition. DSO Entity, which has members in all 27 Member States of all sizes and forms, intends to become the dedicated platform for DSOs to exchange knowledge and expertise on future challenges among its members, as well as with its partners.

As described in Chapter 3.2, last year the Board approved the general objective of knowledge sharing, which has two dimensions (illustration 4.7), as well as the next step which is the development of an Annual Knowledge Sharing Strategy.

Illustration 4.7: The two dimensions of knowledge sharing in DSO Entity

The Strategy will be developed together with the Communication Strategy and will identify priority topics. Towards the end of 2022, DSO Entity sent a survey to its members to collect their feedback and interests on topics they wanted to share. The greater focus on knowledge sharing and communication in 2023 should also help attract new members, who could e.g. also be proactively addressed via a dedicated communication campaign.

Summary:

During 2022, in addition to the already existing and comprehensive mandated tasks in the Electricity Market Regulation, **more tasks were added throughout the year** via legislative and non-legislative acts such as the Implementing Regulation on data interoperability and the Digitalisation of the Energy System Action Plan. Most of these mandated tasks are long-term projects that come with an intensive workload in 2023 as well as the years to come[28]. Given the current developments and the increasing role of DSOs in the energy transition, it is expected that this trend will continue to accelerate in 2023.

Over and above these newly-mandated tasks, requests for sharing best practices and providing knowledge on different aspects of the energy system from various stakeholders are expected to increase in 2023. This is a positive development, enabling DSO Entity to provide the DSO's perspective which has sometimes been forgotten in the past. All this underlines the growing role and importance of DSO Entity, but also its workload and need for human and financial resources. It will also contribute to building community between the members of DSO Entity by increasing their involvement and sharing best practices, experiences and expertise among them.

The table below summarises the priorities described above and their benefits for DSO members.

Pillar	Prorities and focus 2023	Benefit and result of DSO members
1. Network codes and guidelines	• 6 expert groups actively contribute to Network Codes and guidelines by navigating agenda of European Commission and ACER and delivering required input for NCs • Start to work on implementation of NCs in area of Cyber and Data	• DSO-tuned and future proof conditions to facilitate energy transition • Active engagement with stakeholders will bring partner-based relationships • Concrete input for efficient implementation
2. TSO-DSO Cooperation	• Continue and boost constructive collaboration, based on good start in 2022	• More integrated view for entire grid ("system-of-system"), allowing for local/regional characteristics • Balanced approach on TSO/DSO issues by DG ENER, ACER etc. to all levels of the grid
3. Sharing best practices	• Internal : Deploy more activites on internal knowledge sharing with special focus on implementation • External : inform on role of DSOs in energy transition (thoughtleadership), supported by relevant facts & figures from the ground	• Active member participation (DSO Entity as a platform) • For members : easy path to knowledge, espacially on implementation practice • External : unique voice and credible institute that contributes to future proof regulation for DSOs
4. General support and governance	• Manage and coordinate the growing and intensifying governance of DSO Entity in an efficient and effective manner	• Easy communication • Efficient and effective meetings for Assembly, Board, Board Commitees, SAG, CEG and Expert Groups

Illustration 4.9. Overview of priorities 2023 under the three pillars and their benefits for members

28. One example in this respect it the mentioned Implementing Regulation on the Electricity metering and consumption data which foresees the establishment of a Joint Working Group between DSO Entity and ENTSO-E. This Joint Working Group will be responsible for the monitoring the implementation of reference role models for data interoperability, developing guidance for Member States and collecting best practices, which shall then be made publicly available in a (digital) repository (website). Only this one task alone will require substantial financial and personal resources

4.3. Expert Groups' work priorities

The comprehensive work of DSO Entity, which derives from its mandated tasks, is mainly carried out in the Expert Groups under the guidance and with the assistance of the Secretariat. The factsheets that follow give a summary of the priorities and activities planned for 2023 in every Expert Group and the timeline at the end shows the milestones for each Expert Group.

In the overview tables, the distinction between the three main workstreams is generally maintained and only slightly adapted.

- The first workstream has been slightly re-named, becoming "**Core Activity**", since some of the tasks are not specifically about Network Codes but rather take other forms such as Implementing Regulations.
- In the "Knowledge Sharing" pillar, a distinction is made between sharing knowledge that can also take the form of external cooperations with stakeholders where expertise is shared and radar/monitoring of external developments (to be also shared internally).
- Since the actual topics for knowledge sharing will only be defined in the Knowledge Sharing Strategy in Q2 (after the annual plan is approved), they are not yet included in the overview. However, more activities in this area can be expected in 2023 once the priorities have been set by the Board of Directors.

Key-priorities of Expert Groups and Task Forces in 2023

EXPERT GROUP – CYBERSECURITY (EG CS)
OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Implementation of the Network Code Cybersecurity and related comprehensive tasks such as the preparation of TCMs, driving risk analysis cycle, Cybersecurity Incident Classification Scale Methodology, etc	• Set-up a governance process with ENTSO-E on the preparation of implementation • Establish a new Working Group structure with ENTSO-E to prepare implementation (TCMs development)	Sharing knowledge: • Participation in SGTF-EG2 Cybersecurity • Potential cooperation with ENCS and others Radar/Monitoring: • Cyber Resilience Act • Potential new initiatives or measures deriving from DESAP • NIS2 Directive

Milestones 2023

- ▶ Q1-Q4 preparatory works for the implementation of NCCS (TCMs development)
- ▶ Q3 start of the implementation of NCSC

EXPERT GROUP – DISTRIBUTED FLEXIBILITY (EG DF)
OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
Development of Network Code: • Development of new binding rules on demand side flexibility by drafting Framework Guideline on Demand Response to submit it to ACER	• Draft of a proposal of Framework Guideline on Demand Response within the joint Development Team composed of experts from DSO Entity and ENTSO-E • Convening a Drafting Committee with ENTSO-E consisting of representatives of ACER, ENTSO-E, DSO Entity, and where appropriate NEMOs	Sharing knowledge: • Inputs on demand response and distributed flexibility in the SGTF-EG3 • Preparation of key messages of DSOs on distributed flexibility Radar: • Advisory and consistent opinions on topics related to distributed flexibility in the IA on the Data for switching and DR and the amendments of Network Codes on Grid Connection

Milestones 2023

- ▶ Q1 Start of the drafting of the joint proposal for the Framework Guideline on Demand Response within a Development Team with ENTSO-E and a Drafting Committee
- ▶ Q2 Communication of key messages of DSOs on distributed flexibility
- ▶ Q3 ENTSO-E-/DSO run public consultation on draft NC DR
- ▶ Q4 Finalisation and delivery of the drafting of the joint proposal for the Framework Guideline on Demand Response with ENTSO-E

EXPERT GROUP – DATA INTEROPERABILITY (EG DI)

OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
Development of IA (part II): • Preparation of inputs on the upcoming Implementing Regulation for the access of data for switching and demand response and replying to a possible future consultation of the European Commission • Implementation of market rules: setting up a Joint Working Group with ENTSO-E: Coordination of the setup of the Joint Working Group with ENTSO-E (see TSO-DSO cooperation)	Implementation of Implementing Regulation (part I): setup a Joint Working Group with ENTSO-E: • Set up the Joint Working Group with ENTSO-E, mandated in the Implementing on the Electricity metering and consumption data • Creation of a dedicated publicly accessible online platform • Development of guidance and mapping national practices of Member States	Sharing knowledge: • Inputs on the development of the IA on data for switching and demand response (part II) in SGTF-EG1 (aimed to be replaced by the new Smart Energy Expert Group) and in the future European Data 4 Energy group • Draft of an internal paper on submetering • Discussion on possible cooperation with ebIX • Cooperation on the IEC CIM (International Electrotechnical Commission's Common Information Model)

Milestones 2023

- Q1 Setting up the cooperation with ENTSO-E in the Joint Working Group (implementation of part I)
- Q2 Reply to the first consultation on the draft reference model of supplier switching and the draft reference model for demand response (part II) and internal paper on submetering
- Q3 For the mapping of national practices by the Joint Working Group, elaboration of a draft version of the guidance on the reporting of national practices, opening of a public consultation on the draft guidance and launch of a website to make the guidance available
- Q4 Finalisation of the draft reference model of supplier switching and the draft reference model for demand response (part II) and reply to the second related consultation

TASK FORCE – TEN-YEAR NETWORK DEVELOPMENT PLAN (TF TYNDP)

OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Engage DSOs in TYNDP-cycle starting with the ongoing process for 2024 • Investigate and define DSO's role in the overall TYNDP process for the years to come	• Establishment of a work schedule together with ENTSO-E WGSB (Scenario building working group) with focus on Demand, Innovation and Supply aspects of the scenario development • DSO Entity and ENTSO-E will further investigate how the collaboration of the two associations will be most beneficial for both parties	Sharing knowledge: • Member in regional groups in PCI-selection process (TEN-E) • Copenhagen Forum • Knowledge exchange on DSO scenario development • Establish knowledge base on Smart Grid PCI projects Radar: • TEN-E implementation in Member States

Milestones 2023

- Q1 establish a work plan together with ENTSO-E for 2023–2024
- Q1/Q2 participation in ENTSO-E's consultation on the scenario development for 2024

TASK FORCE – DIGITALISATION OF THE ENERGY SYSTEM: ACTION PLAN (TF DESAP)

OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Start developing a Digital Twin of the European electricity grid with ENTSO-E • Elaboration of guidance and support for network operators on sustainable and cost-effective smart investments by the development of a tailored set of "Smart Grid Indicators" (SGI) in cooperation with NRAs and ACER • Development of Smart Grid Indicators by performing a gap analysis on the previous work and further align with ACER on the topic	• Start of the projects outlined in the Declaration of intent signed with ENTSO-E • Collaboration with ENTSO-E on Horizon Europe programme • Set up an advisory board with grid users and other relevant stakeholders	• Communicate the work on Smart GRID Indicators clearly with our members • Collect and share best practices on Digital Twins • Establishment of first contacts with ACER on Smart Grid Indicators • Establish a strategy on how to approach Horizon funding in the future

Milestones 2023

- Q1 Preparation of TOR for joint task force with ENTSO-E on the Digital Twin and the Smart Grid Indicators (TF DESAP)
- Q1 Establishment of first contacts with ACER on Smart Grid Indicators
- Q1 Clarify DSO Entity's strategy on Horizon funded research and innovation projects
- Q2 Gap analysis on the previous work on the Smart Grid Indicators
- Q2 Establish the advisory board for DESAP as outlined in the DOI with ENTSO-E
- Q4 Final report on the Smart Grid Indicators

EXPERT GROUP – EXISTING NETWORK CODES (EG EXNC)

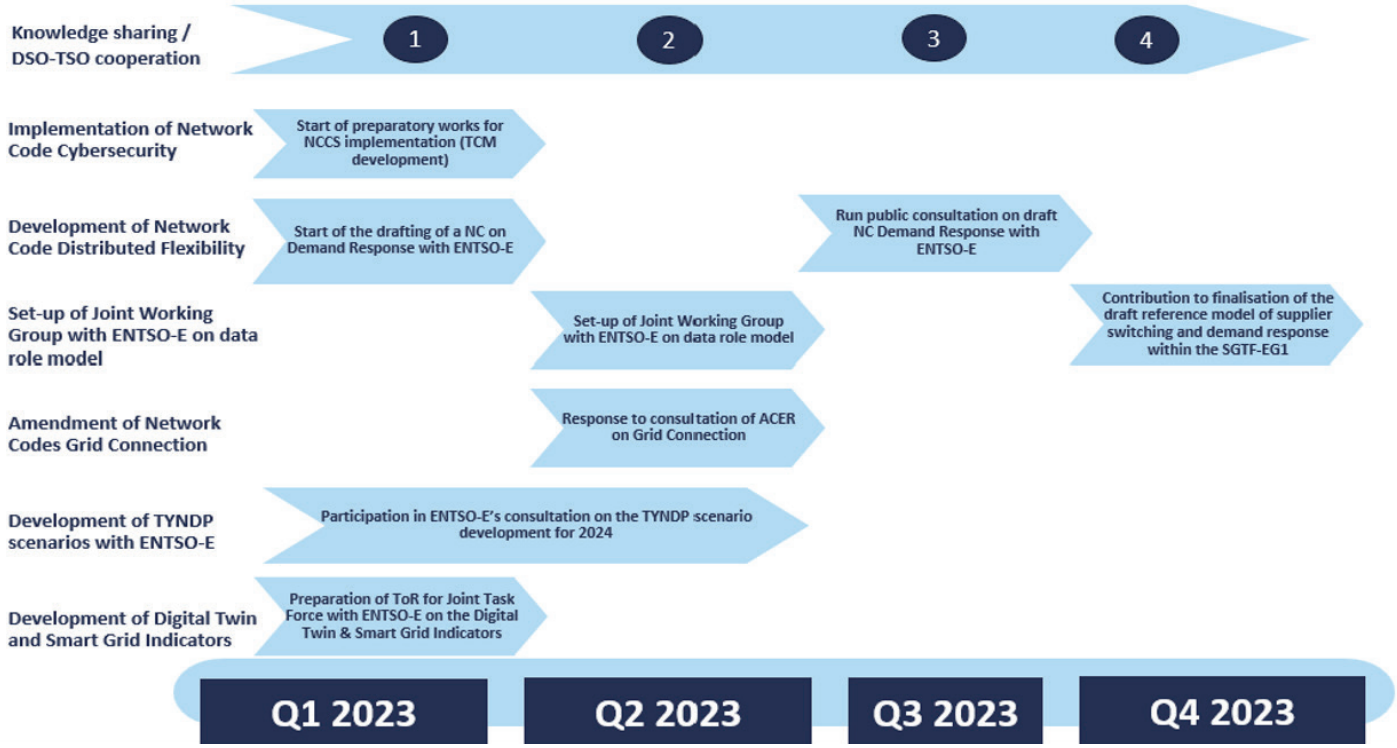
OUTLOOK 2023

Core activity	DSO-TSO cooperation	Knowledge Sharing
• Finalisation of the amendments of the NC Grid Connection during 2023 • Contribution to consultations of existing NC on market and operation (expected as of Q2/23) • Technical consultation on existing rules on electricity (2024-26) - (e.g. KORRR)	• Continue and enhance cooperation with ENTSO-E, ACER and NRAs (on Grid Connection Codes Review).	Sharing knowledge: • Participation in EU NC Stakeholder Committees (ESC) Radar: • Monitoring developments on Market Design Reform with a potential impact on existing NCs (Q1-Q2/23)

Milestones 2023

- Q1 Participation on (formal and informal) workshops with ACER, ENTSO-E and NRAs
- Q2 Response for public consultation of ACER on Grid Connection
- Q3-Q4 Final inputs on the recommendation drafting of ACER on grid connection

Overview of milestones in timeline:



5. SUMMARY & CONCLUSION

DSO Entity unites more than 900 diverse members from 27 Member States and so represents a manifold but collective voice of all European DSOs when working on technical conditions to enable this energy transition together with ENTSO-E. Achieving the European objective of climate neutrality, increasing the share of renewables and empowering consumers necessitates the decentralisation and smartening of a formerly centralised and uni-directional system.

In this transition, DSOs take centre stage as the interface between consumers and a reliable delivery/production system, as well as key-enabler of a greener, just, resilient and secure energy system. To facilitate such a massive transition, the early involvement of and a close cooperation with DSOs is as important as the existence of the right regulatory framework to enable DSOs to expand and smarten their grids. The growing importance of DSOs as key-enabler for the green energy transition was acknowledged in the Clean Energy Package (CEP) by establishing DSO Entity. In June 2021 DSO Entity officially started working according to its mandated tasks, as outlined in the Electricity Market Regulation (Art. 55).

2022 - Looking back

In 2022, DSO Entity was built as an organisation with a sophisticated and balanced governance regime, highly motivated and engaged members and a growing staff. Tragically, in the same year, war returned to Europe which introduced a "Zeitenwende" (turning point) not only, but especially, in European energy policies. The need to accelerate the transition towards a more energy-independent system, based on decentralised renewable production, entailed the publication of several emergency measures and an increase in already ambitious targets. These developments also affected the activities of DSO Entity, since important aspects of its work – for example on facilitating distributed flexibility solutions – increased pace, and ever more questions arose on energy sharing, empowering and protecting consumers and sharing best practices on the integration of renewables into the system. Despite the turbulent times, DSO Entity achieved its important milestones, which were also relevant in the context of the crisis. These included the delivery of the Network Code on Cybersecurity together with ENTSO-E and several initiatives carried out by its six Expert Groups on aspects of distributed flexibility, data interoperability, adapting existing network codes and scenario development for network planning (TYNDP). Also, the interest in sharing best practices from different DSO-perspectives has increased since it became obvious that an accelerated transition will not be possible without DSOs.

2023 - Looking ahead

While 2022 was the year of DSO Entity's establishment and of some early achievements, 2023 will be the first year of full operation. Together with engaged members and well-structured Expert Groups, DSO Entity will intensify its (technical) work on a growing list of mandated tasks and delegated implementation assignments. At the political level, 2023 will be an intensive "year of decisions" since all files of the Fit for 55-package and REPowerEU will be finalised. Several of these files prescribe an accelerated deployment of decentralised renewables, such as rooftop solar and

the electrification of the heating and transport sectors, with a wide roll-out of heat pumps and EVs with obvious effects on DSOs. In parallel, the reform of the electricity market design will be proposed in March with close links to the core tasks of DSO Entity such as the development of the Network Code on Demand Response together with ENTSO-E. Other important activities are envisaged for 2023, such as the establishment of a Joint Working Group with ENTSO-E on data role models, the set-up of a joint task force with ENTSO-E on developing a digital twin and investigating smart grid indicators, supporting the TYNDP-scenario development and many more. In all these workstreams, the close cooperation with ENTSO-E will be continued and intensified.

Moreover, DSO Entity envisages a greater and more active engagement with all its members to guarantee the inclusion of small and large DSOs alike. A greater focus on internal and external knowledge sharing should stimulate discussions among members and provide expert input at the European level. As one of our Board members puts it: "Developing network codes is our core activity but without our members we cease to exist." Only with the expertise and involvement of all our members – be they large or small, rural or urban – can DSO Entity flourish and fulfil its tasks at the EU-level to unite and represent all DSOs in their diversity.

ANNEXES

Annex I – Relationship between broader EU strategies and technical EG

Cyber and analogue Security (EG CS):

- In close relation to the works on the NCCS stands the Cybersecurity package of the European Commission proposed in December 2020. The proposal encompasses a new EU Cybersecurity Strategy that aims to bolster Europe's collective resilience against cyber threats, as well as two legislative proposals: a revision of the Directive on measures for high common level of cybersecurity across the Union (revised Directive on security of network and information systems, NIS Directive or 'NIS 2'), and a new Directive on the resilience of critical entities. Both were adopted in 2022 and published in the official journal of the EU in December 2022.
- As mentioned in Chapter II, the war in Ukraine prompted new initiatives in this policy area in the form of Council recommendations on a five-point plan for resilient critical infrastructure which aims to maximise and accelerate work to protect Europe's critical infrastructure.
- Also in autumn, an initiative even longer in the planning, the proposal of a Cyber Resilience Act (CRA), was published and is still under legislative scrutiny. It focuses on cybersecurity aspects of hardware and software by laying down harmonised cybersecurity rules for placing products with digital elements on the EU market.
- Evidently, all these activities are related to the ongoing work on the NCCS and the work of EG Cybersecurity. The final NCCS is expected to be published in early 2022 and will have to be implemented, partly in close coordination with some of the other mentioned files. Given the current situation, it is likely that further emergency measures in this area will arise in 2023.

Data Strategy and Digitalisation of Energy Action Plan (EG DF, EG DI, TF DESAP):

- As outlined in its Data Strategy (2020), the European Commission strives for high standards in personal data protection and for a more open data society with easier access to (reusable) data. Both aspects are relevant for DSOs which act as guardians for the (personal) smart metering data of their customers but also oversee (sensitive) non-personal data of their critical infrastructure assets. Moreover, adequate data access and exchange is vital for facilitating flexibility solutions. These ongoing horizontal (E-Privacy, Artificial Intelligence, Data Act) and sectoral (Digitalisation for the Energy System - Action Plan, Energy Data Spaces) activities of the Commission in the data area will need to be monitored.
- In its latest sector-specific strategy on the Digitalisation of the Energy System Action Plan (DESAP) in October 2022, the Commission underlined once again the direct link between achieving the objectives of the European Green Deal and the further digitalisation of the energy system. The Action Plan sketched five key areas in which new initiatives will follow in the coming years. Several of those are highly relevant for DSO Entity, namely: the further promotion of connectivity, interoperability and seamless exchange of data between actors; more and better coordinated investments in the electricity grid; enhanced consumer-protection and engagement; and ensuring a cyber-secure energy system.

- These ongoing and new initiatives are relevant in the context of the work on the Network Code on Distributed Flexibility and the Implementing Act on Data Interoperability. Distributed flexibility and demand response cannot be achieved without digital applications, including smart metering, smart grids and trustworthy data management.

Green Deal Strategy (EG DF, EG DI, CEG)

- The Strategy of the Green Deal marked the beginning of the European Commission's enhanced climate ambition and led to the subsequent legislative proposals in the form of the Fit for 55 packages. These proposals (Fit for 55 part I and II) aim to increase the EU's energy targets and to align its policy measures with the new goal of climate neutrality by 2050. This package has direct and indirect impacts on DSOs and the central objectives of these files were strengthened in the REPowerEU proposals, as described in Chapter II.
- The REPowerEU proposals were published in May and March with the intention of "rapidly reducing the dependence on Russian fossil fuels by fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union". As part of the plan, the European Commission proposed a series of amendments of existing legislation, such as the Renewable Energy Directive, the Energy Performance of Buildings Directive (EPBD), and the Energy Efficiency Directive (EED) which were already in the process of being revised as part of the 'Fit for 55' package.
- In addition to these longer-planned initiatives, emergency measures in the form of Council Regulations were also proposed, such as the Council Regulation on accelerating the permitting process of renewable energy ((2022/2577/EU) which should help speed-up permitting procedures for renewables. It also included acceleration for grids. While some of the REPowerEU initiatives are already agreed (renewables part), some are still in the making but are nevertheless highly relevant for DSOs, such as the rooftop solar obligation.
- Also, ad hoc activities in this area by the Commission in 2023 cannot be precluded.

Circular Economy Strategy / Sustainability (management) within the DSOs (TF TYNDP, CEG)

- DSOs are not only important enablers of the energy transition but also active contributors to emission abatements and environmental improvements in their own operations and facilities. In this context, they are confronted with new European provisions on which best practice exchanges with colleagues from other countries might be useful.
- Currently, new challenges are to be expected in the Corporate Sustainability Reporting Directive (CSRD)[29] in the context of the Taxonomy Regulation and through the revision of the Regulation on Fluorinated Greenhouse gases (F-gases), which are widely used by DSOs in switchgear. The outcome of dossiers such as the F-Gas file may influence DSO's abilities to electrify at a fast phase.

29. Directive (EU) 2022/2464 of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting

Annex II – List of abbreviations

ACER	The European Union Agency for the Cooperation of Energy Regulators
BESC	The Expert Selection Board Committee
CBC	Communication Board Committee
CEER	The Council of European Energy Regulators
CEG	Country Expert Group
CIRT Network	Computer Security Incident Response Team
CRA	Cyber Resilience Act
CSRD	Corporate Sustainability Reporting Directive
D4E	Data for Energy
DC	Demand Connection
DESAP	Digitalisation of the Energy System: Action Plan
DoI	Declaration of Intent
DSOs	Distribution System Operators
E.CSO	European Cyber Security Organisation
EC	European Commission
ECSO	European Cyber Security Organisation
EED	Energy Efficiency Directive
EE-ISAC	The European Energy - Information Sharing & Analysis Centre
EG CS	Expert Group Cybersecurity
EG DF	Expert Group Distributed Flexibility
EG DI	Expert Group Data Interoperability
EG ExNC	Expert Group Existing Network Codes
EGs	Expert Groups
ENCS	The European Network for Cyber Security
ENISA	The European Union Agency for Cybersecurity
ENTSO-E	European Network of Transmission System Operators for Electricity

EPBD	Energy Performance of Buildings Directive
ExCo	Executive Committee
FF55	Fit for 55 package
F-gases	Fluorinated Greenhouse gases
ICT	Information and Communications Technology
KS	Knowledge Sharing
MoU	Memorandum of Understanding
NC	Network Code
NCCS	Network Code Cybersecurity
NIS Directive	The Directive on security of network and information systems
PICs	Projects of Common Interest
RES	Renewable Energy Source
RfG	Requirements for Generators
SAG	Strategic Advisory Group
SGI	Smart Grid Indicators
SGTF	Smart Grids Task Force
SGTF-EG1	Expert Group 1 of the Smart Grid Task Force of the European Commission
SGTF-EG2	Expert Group 2 of the Smart Grid Task Force of the European Commission
SGTF-EG2	Expert Group 2 on Cybersecurity of the Smart Grids Task Force
SGTF-EG3	Expert Group 3 of the Smart Grid Task Force of the European Commission
SGTW-EG3	Expert Group 3 of the Smart Grids Task Force
T&D BC	TSO-DSO Board Committee
TCMs	(Terms Conditions and/or Methodologies).
TF DESAP	Task Force Digitalising the Energy System - Action Plan
TF TYNDP	Task Force Ten Year Network Development Plan
ToR	Terms of References
TSOs	Transmission System Operators
TYNDP	Ten Year Network Development Plan

DSO ENTITY
DSOs FOR EUROPE