Public Funding for DSOs

FINDINGS OF A QUESTIONNAIRE LAUNCHED BY EU DSO ENTITY

June 2025

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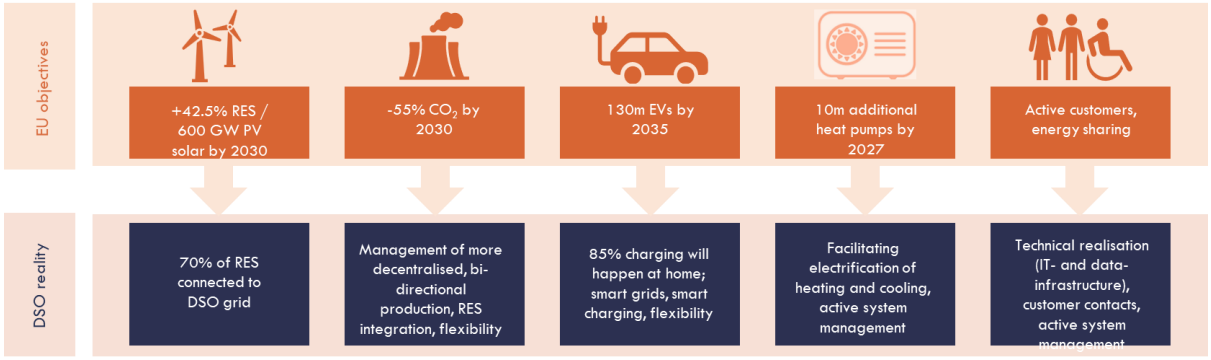
Editorial note: This paper was developed by Task Force in Investment Funding and Finance to deliver on Action 10a of the Grid Action Plan (GAP), with the goal of providing options to facilitate DSOs' access to public funds. This paper was approved by DSO Entity's Board of Directors on June 12, 2025.

Prelude

The next few years will be crucial to ensure that the EU countries will be able to reach the ambitious net-zero goals set out by the European institutions. The invasion of Ukraine by Russia has underscored the urgent need of accelerating the energy transition, for reaching carbon neutrality and ensuring strategic independence for the continent. To achieve this objective, a few targets have been introduced:



By 2030, with a 42.5% increase in Renewable Energy Resources (RES) and 70% of total RES connected to Distribution System Operator grids, DSOs face a transformative challenge. This "generation" challenge is further amplified by a surge in demand for electricity coming, among other from the electrification of transport (with an estimate 130 million electric vehicles, with 85% of charging occurring at home and a surge on electric busses and trucks), of heating (with additional 10 million heat pumps by 2027) and large industrial process including data centres[1], all presenting an invigorating opportunity for DSOs to innovate and adapt.

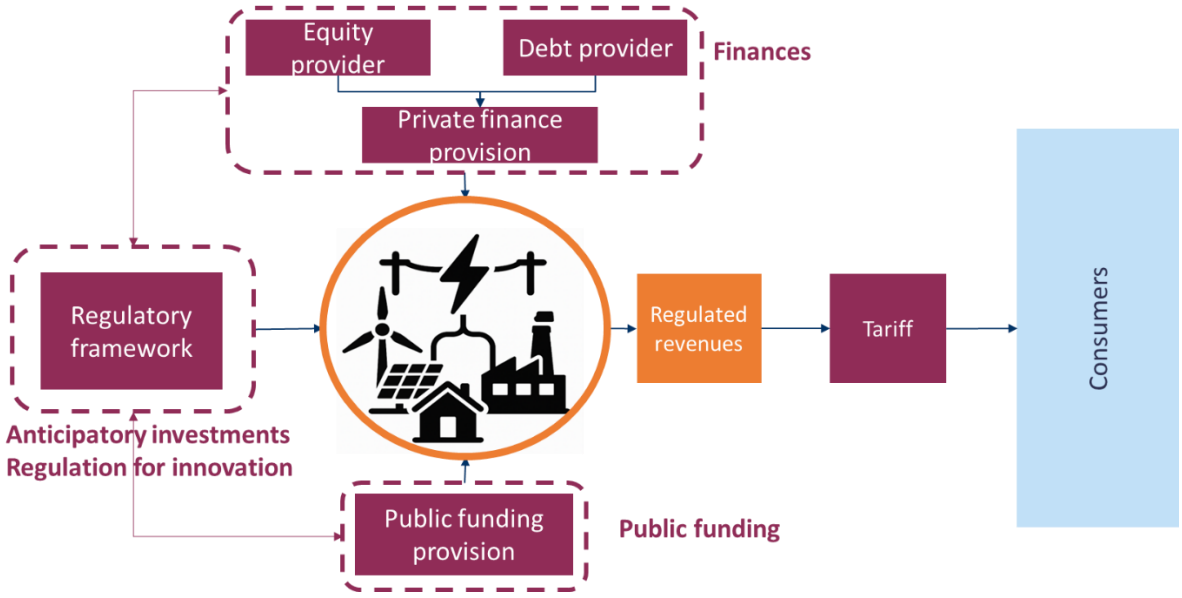
To obtain these objectives, estimates suggest that between now and 2050, around € 55-67 billion/year of investments will be required to make the European distribution grid fit for the exponential increase in demand of electricity.[2] This volume of investment is well above the historic levels of investment in the sector which then brings the additional challenge of obtaining the necessary funding to deliver them.

Whilst it is crucial that DSOs can have access to permits, skilled workers and other crucial inputs, nothing will be achieved if they do not have a way to (efficiently) pay for these inputs. As part of the work in its Task Force on investment funding and finance, DSO Entity is considering the different

[1] Data centres represented between 1.8% and 2.6% of the total EU electricity use in 2022. Estimate providing in, Kamiya, G. and Bertoldi, P., Energy Consumption in Data Centres and Broadband Communication Networks in the EU, Publications Office of the European Union, Luxembourg, 2024, doi:10.2760/706491, JRC135926

[2] Eurelectric, 2024 Grids for speed. Available in https://powersummit2024.eurelectric.org/wp-content/uploads/2024/07/Grids-for-Speed_Report_FINAL_Clean.pdf

approaches DSOs can use to efficiently deliver their financial needs. These approaches are considered in the diagram below:



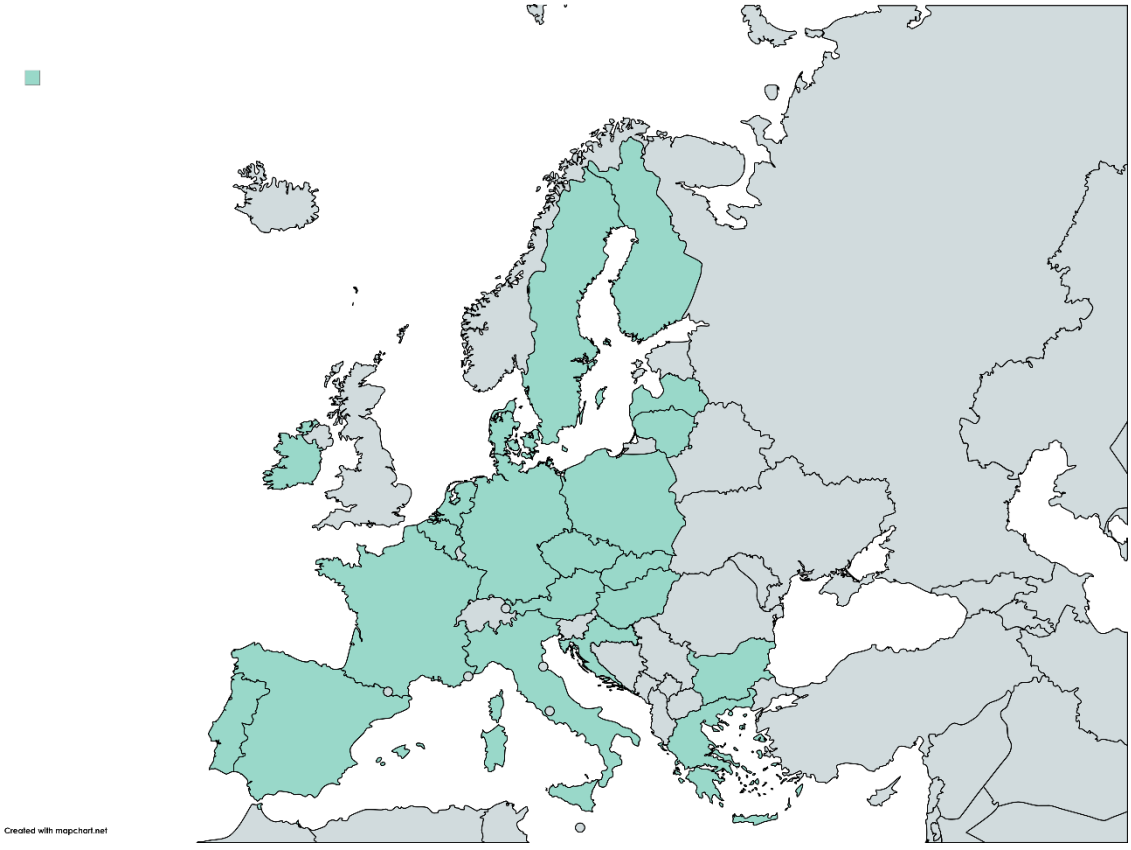
When considering the financial needs of a company, it is important to consider all the tools that are available for DSOs. When considering these sources, it is important to keep in mind that the expenditure of the companies is lumpy, and the assets will last for a long period of time. As a result, recovering those expenses from grid users in the period they have been incurred is not sensible as it would overwhelm consumers and therefore needs to be spread over the lifetime of the assets. In other words, DSOs need to incur costs of delivering the assets but also of financing it.

To recover these costs, DSOs have two potential sources of revenues, tariffs and public funds in the way of grants. Given the natural monopoly characteristics of the distribution grid, DSOs' tariffs are regulated to protect consumers. Therefore, the regulatory framework is the main mechanism to finance investment. In addition, to ensure that DSOs can spread cost recovery over the life of the assets, they need to have an (efficient) access to finances and the costs of these finances should also be recovered via tariffs.

To facilitate the analysis, these different tools are considered separately (even if potential interactions are also discussed). In this paper, the focus will lie on the DSOs' capacity to obtain the necessary (public) finances. The paper will present the results of a survey undertaken by DSO Entity's members to identify the barriers they have identified in the access to public funding. After that, it goes to present some potential mechanisms to address these challenges.

Introduction

To better understand the financial landscape and funding mechanisms available to Distribution System Operators (DSOs) across the European Union, the Task Force Finance (TF FIN) of DSO Entity launched a comprehensive questionnaire in July 2024. The survey, which saw participation from 36 companies across 22 countries, aimed to gather detailed insights into the financial structures, acquisition and availability of public funding, ideas for new funding programs, and non-public financing options for grid investments.



The questionnaire was divided into three key parts:

1. General information and financial structure of the DSOs
2. Acquisition and availability of public funding
3. Ideas for a new funding program for DSOs

The first part of the survey provides general information and outlines the financial structure of the participating DSOs. With a total of 98 million connections and regulated revenues of €20.7 billion in 2022, the surveyed companies represent a significant portion of the EU's energy distribution market. The total Regulatory Asset Base (RAB) of these companies stood at €85 billion in 2022, with a median

RAB of €2.3 billion. Over the past three years, these DSOs have, jointly, on average invested €9 billion per year into grid infrastructure, with CAPEX/RAB ratios ranging from 3% to 22%, averaging at 10%.

The survey also examined the shareholders' structure of the DSOs surveyed, providing a comprehensive overview of the ownership and governance models prevalent in the sector. By analysing these aspects, the Task Force aims to identify best practices and potential areas for improvement in the funding and financial management of DSOs, ultimately contributing to the development of more efficient and sustainable energy distribution systems across the EU.

1. EU Public Funding

General Experience

65% of the respondents to the DSO Entity Questionnaire had applied for EU funding and had participated in 193 EU-funded projects. The EU Research Framework and Cohesion Programmes were the funding programmes which DSOs have most frequently applied to or intend to apply to. However, a broad spectrum of EU funding programmes (e.g. Connecting Europe Facility (CEF) Energy, Digital Europe Programme, Innovation Fund, Modernisation Fund, EU LIFE Programme) have also received funding applications from the responding DSOs.

- Additional Investment financing
- Finding technological solutions
- Creative innovative products and services
- Remaining competitive
- Network development
- Staying ahead of industry trends
- Collaboration
- Understanding regulatory aspects in other countries
- Acceleration of strategic/important projects
- Faster approval of permitting
- Reputation

Importance of EU Funding for DSOs

DSOs presented multiple benefits of participating in EU projects, apart from 'just' providing financing. These ranged from the development of new technologies, finding technological solutions and improving existing processes to accessing networks, collaboration between experts and the acceleration of important and strategic projects. Therefore, increasing the EU funding percentage of DSOs grid investments may play a role in mitigating the increase in tariffs for end consumers.

The adjacent table shows the benefits of EU funding which were reported by DSOs.

Challenges of EU Funding Acquisition and Management

Despite the positive numbers in terms of DSO involvement in EU-funded projects, a number of challenges and hurdles in funding acquisition were identified. The main barrier was administration and burden of applying and managing EU-funded projects: not only did DSOs participating in EU-funded projects face this issue, but also some DSOs indicated they do not apply to European funding for this very reason. Regulatory aspects such as the widespread deduction of acquired funding from the RAB also prevented DSOs from applying for funding. That said, some countries have developed a form of incentive that ensures financially rewarding participation in public funds

Other barriers included the perceived ineligibility of the DSO for funding, the burden of the CEF Energy Projects of Common Interest (PCI)/Projects of Mutual Interest (PMI) process and subsequent low success rates of the CEF Energy Programme. DSOs also reported that important projects need time to

prepare, making short deadlines impossible to meet and requiring specialists in EU funding which many do not have.

Strengths and Weaknesses of Centrally Managed EU-funded Programmes	
Strengths	**Weaknesses**
• Clear and stable framework • Allows for international collaboration and joint working on common issues • Focus on EU priorities, which cover all Member States • Ample funding available for projects focusing on digitalisation, research and innovation	• Focused on cross-border connections rather than interconnected systems • Lower success rates • Often higher bureaucracy • Often very short deadlines • Less budget for investment projects

2. Nationally Managed EU funds & National Funding Schemes

Among all the sources of funding available to DSOs, support programmes and funding available at national level are a particularly important source of support for DSOs development activities.

The growing scale of the challenges faced by DSOs require significant financial outlays to pay for the investments needed to make the energy transition a success. To facilitate the access to these finance, national public funding could have two main uses:

- First, as described in our paper on anticipatory investments, public funds could be used to support consumers in the process of electrification of their demand.
- Second, public funds can also be used to facilitate DSOs access to the (private) financing they will need to support their investment plans (e.g. provision of guarantees or equity, etc). In this context, it should also be noted that the need for financial resources provided by national funding bodies (their size and scope) is strongly linked to the level of development and needs individually defined in specific regions of the EU and Member States. National funding tends to reflect the specific needs or priorities of a given Member State.

The picture that emerges from the respondents' answers alone is that over 40% of them have applied or intend to apply for funding from national funding bodies. However, we cannot stop at this conclusion as a more in-depth analysis reveals a more complex and much broader picture, namely:

Understanding of the concept of national funding varies from country to country

The convergence of observations and conclusions can be related to two types of national funding, i.e. programmes set up at national level and funded from national sources, and programmes funded from EU sources (e.g. cohesion funds, Modernisation Fund) but managed and implemented at national level. Therefore, issues related to these two types of national funding have been distinguished and analysed separately.

Moreover, there are large differences in the availability of both EU and purely national funding for DSOs in different Member States. Despite the critical need for investments in distribution grids to facilitate the energy transition, only €1.3 billion of the €33 billion allocated to all energy-related projects in the EU's regional funds (2014–2020) was directed toward distribution and smart grid projects. From the CEF-funded energy infrastructure projects worth €5.324 million, only €237 million was allocated to smart grid projects for DSOs.

In addition, the level of activity of DSOs in applying for funding and the awareness of the possibilities of benefiting from these funds varies greatly between Member States.

In some Member States there are no nationally funded support schemes or where potential schemes exist, they are not suitable for DSOs

Therefore, the high or low activity of DSOs or their intention to apply for national funding is partly related to the availability of support schemes. The lack of intention to apply for funding from national programmes mentioned in some of the responses is due to the lack of existence of such programmes or the mismatch between the conditions for granting funding and the specificity of the functioning of the DSO.

The types of support instruments available at national level vary, as do the types of projects for which DSOs can apply for funding.

The offer of financial support for DSOs at the national level includes a diverse range of instruments, including grants, loans, or both.

In terms of applying for external financing, some DSOs focus only on programmes specific to DSOs, supporting network development and R&D in the sector, while others have a much broader scope, going beyond the network to include obtaining funding for the preservation of nature, e.g. bird protection.

To better reflect the complexity of the DSOs' approach to national funding, the questionnaire also contained questions on **organisational and procedural issues related to the process of applying for and managing funding.**

These are presented in the table below, which compares the strengths and weaknesses of national funding - separately for nationally funded programmes and for EU programmes implemented at national level.

Strengths and weaknesses of nationally funded programmes	
Strengths	**Weaknesses**
• less complex application procedures than EU programs • scope and requirements better tailored to local and sectoral needs • easier access • flexibility • higher success rates • national language • easier and more direct communication with the donor.	• lower budget • in some cases, lack of administrative support • In some cases, lower intervention rates • Lack of a stable framework for cost recovery
Strengths and weaknesses of EU programmes implemented at national level	
Strengths	**Weaknesses**
• scope and requirements better tailored to local and sectoral needs - programmes focused on national market • easier access • higher success rates • national language • easier and more direct communication with the donor • in many cases, higher intervention rates.	• in some cases, high administrative burden, more complex application procedures, more bureaucracy • heterogeneity between regions of a single country - weakness in the case of the distribution network if the DSO operates in a larger area, going beyond a regional programme. • In most cases lack of incentives ensuring financial rewarding participation in public funds
Frequent reasons for withdrawal - common to national and EU funds:	
• unfavourable regulatory approach • administrative burden.	

3. Focus on the Recovery and Resilience Facility (RRF)

Half of the countries where the surveyed DSOs operate dedicated specific measures from their Recovery and Resilience Plans (RRF) to finance electricity grids. These include Spain, Italy, Belgium, Poland, Czech Republic, Hungary, Croatia, Slovakia, Latvia, Greece and Cyprus.

The supporting mechanisms implemented by national governments mainly consist of grants financing investments in smart grids and resilience. According to the survey, the total amount of RRF financing awarded to DSOs amounts to €5.3 billion, corresponding to an average value of €90 per client. In general, this considerable amount of resources is not accounted in the RAB. Only a few countries (Italy,

Spain and Hungary) have developed a form of incentive that ensures rewarding participation in public funds financially.

The RRF offers several strong points compared to more traditional EU funding programmes, such as the EU Innovation Fund or Horizon Europe. These can be mainly identified as a) their alignment with national strategic priorities; b) higher success rate for grid related projects, due to lower competition; c) full cost coverage of investments as opposed to EU programmes such as Horizon Europe and d) higher funding availability and grant size.

As the final deadline for RRF project conclusion is approaching, DSOs are doing their best to meet it, but some critical issues emerge. DSOs are mainly facing difficulties from complex administrative procedures, which slow down the initiation and progress of infrastructure projects which are typically complex investments. The need for many procurement contracts and supply chain disruptions, especially after the COVID-19 pandemic and geopolitical tensions (e.g. war in Ukraine), led to shortages in transformers, and other critical components. Furthermore, situations have emerged where calls have only been launched at the end of 2024 or are even scheduled to be launched in the first quarter of 2025, meaning that DSOs will have to complete projects in less than one year from the time when they receive funds.

In some cases, such strict timelines for project completion have led national DSOs associations to request a temporal extension.

Reporting rules are also an obstacle for DSOs: complex and not well-established procedures for reimbursement lead to a significant financial exposure.

4. General Principles for Better Management of EU funding

DSOs play a critical role in the energy transition, yet they face persistent challenges in accessing EU funding. This section explores three key dimensions of this issue. First, it examines the administrative burden associated with both centrally and nationally managed EU funding programmes, which can be particularly onerous for smaller DSOs with limited resources. Second, it analyses how current regulatory frameworks often fail to adequately recognize EU-funded investments, creating disincentives for DSOs to apply. Finally, it outlines a set of guiding principles and proposals to improve access, streamline procedures, and ensure that future EU funding mechanisms are better aligned with the operational realities of DSOs.

4.1 Administrative Burden

Centrally Managed Funding

While EU funding provides crucial support for a wide range of projects across Member States, the administrative burden associated with accessing and managing these funds remains a significant challenge.

Concerning funding programmes directly managed by the European Commission, although simplification measures have been introduced in the period 2021 – 2027, a number of administrative challenges remain. DSOs, particularly smaller or regional ones, often operate with constrained human and financial resources. Their primary focus is on maintaining and upgrading grid infrastructure, ensuring energy reliability, and complying with national regulatory requirements. As a result, they may lack dedicated staff with the expertise or time to navigate the sometimes complex and time-consuming EU funding application processes with tight deadlines. In many cases, the cost of preparing and managing an application—along with fulfilling reporting and compliance obligations—can outweigh the perceived benefits, especially for smaller-scale projects. For example, Horizon Europe calls typically involve large consortia (20-40 partners) submitting proposals. In Austria, although Horizon Europe simplification measures (e.g. lump sums) should reduce the number and amount of cost justifications needed during project implementation, as DSOs are public and subject to controls by the national/regional court of auditors, they are still required to maintain extensive records of expenditure and the simplification measures have not alleviated the burden. Measures such as one set of rules for all centrally managed funding programmes and one funding portal where proposals can be submitted in the current funding period have been effective and should be continued beyond 2028.

It is important that the operating environment of DSOs are well understood by key stakeholders in the support, evaluation and audit of EU funded projects. For example, irrespective of the instrument or disbursement approach, training audit personnel with sector-specific understanding of DSO projects regarding types of equipment used and common expenditures would help with the speed of the validation process from the competent authorities. Auditors should receive specialized training to understand the operational and technical requirements of DSO projects, facilitating an efficient audit process.

Nationally Managed Funding

As previously mentioned in Chapter 3 the experience from RRF funds for electricity grids shows critical issues in terms of the heaviness of procedures for project implementation and reimbursement. Given the amount at stake (the order of magnitude of the average size of projects financed by RRF is tens of millions of euros) the administrative burden affecting cost reporting rules turns out in a significant financial exposure for DSOs, thus representing an important barrier that might disincentive their access to similar funding mechanisms in the near future. In addition, complex and burdensome reporting requirements require specialized internal resources and generate indirect administrative costs not always covered by grants.

Below we propose a list of possible actions to simplify reporting rules and reduce financial exposure typically generated by public funding:

1. **Raise by default the amount of the initial anticipation to 30%**
2. Implement **lump sum mechanisms, standardized cost models and simplified Cost Options (SCO)**. The Commission has already positively tested lump sum financing in Horizon 2020, which is based on the achievement of deliverables and milestones. This approach has then been embedded in the successor programme Horizon Europe. Companies are then partially relieved from bureaucracy which leads to unsmart and

inefficient administrative practices, such as printing thousands of timesheets for hand-written signatures. A lump sum or standard costs model would not only streamline the reimbursement of personnel costs but would also be more fitting to typical logistics management of DSOs, with cost accounting based on moving average approach, that in the common framework of EU projects might not be eligible for reimbursement.

A positive case of streamlining payments procedures for RRF projects is the adoption, by the Greek Government, of an output-based Simplified Cost approach, linking grant payments to the achievement of specific milestones, such as the completion of 50% of the project work, rather than requiring detailed expenditure validation, that is postponed at a later stage.

3. **Establish clear and peremptory deadlines for payments by public managing authorities** following DSOs' reimbursement requests. In other words, public supervising bodies should be committed to concluding controls on the documentation required for reimbursement within a pre-established and mandatory deadline.

Below a table summarizing the problems associated with administrative hurdles along with some good practices:

The Application Process	
Solutions / Ideas	**Good Practices**
Short Deadlines	
Publishing application call schedules well in advance (at least one year) along with a complete set of requirements and document templates Applying appropriately long deadlines to calls, from their announcement to the deadline for submitting applications for funding. (There have been cases where calls have been launched on the day of their announcement, with a deadline for submitting applications for funding two months later. This is too short. to prepare DSOs projects) Allowing funded projects to have a longer implementation time horizon, which will enable important investments to be supported, but which will require a longer investment process. Additionally, it is recommended that projects be allowed to be phased or staged within more than one MMF, enabling important investments in the distribution network to continue. Currently, project selection criteria tend to favour investments that are ready to implement, such as those with real estate rights and building permits. Consequently, the projects that receive funding are not necessarily the ones that contribute the most to energy transformation, but rather those that can be implemented relatively quickly and certified for EU funds.	1.This can be observed with the EU Innovation Fund and EU LIFE Programmes, where the topics for years calls remain roughly the same. 2.The EU AFIF call runs over 12-18 months with different cut off deadlines where submitted applications will be funded. 3.Under the EU Innovation Fund and the EU LIFE Programme, projects can run for at least 10 years. 4.The EU Innovation has a period built in to bring the project to financial close (which includes obtaining permits, getting approval from supervisory boards etc.) This could be rolled out to other Programmes such as the CEF Energy programme.
Simple Application Documents	
When several funding applications are submitted to one institution there is sometimes the need to submit the same documents and information multiple times. DSOs are credible entities operating in a market with strong legal restrictions, and they are often subject to inspections and audits by various state bodies, including the NRA, national court of auditors and financial institutions. Therefore, this has potential to be simplified There is often the requirement to submit detailed technical documentation with the application,	1. Poland (RRF): during the call for applications for funding dedicated to the development of smart grids and increasing the potential for renewable energy sources, the financing institution adopted simplified funding application rules, not requiring the submission of detailed investment data. This approach reduced burden on the DSOs, whose projects cover almost 1,000 km of power lines and tens of thousands of power stations. 2. Admission of funding for projects at various stages of implementation readiness, including

which is often very extensive. This seems to be unnecessary for assessing applications for funding and being often incomprehensible to the experts who assess them. There is often the requirement to submit detailed investment data with the funding application, as this information may not be available at the design stage of the investment, or the acquisition and collection of this information may involve an excessive burden and hundreds and thousands of documents. Moreover, DSOs are sometimes requested to provide information on commercialisation and potential profit to be generated by a product as part of the application which is not relevant.	projects with a complete set of approvals and building permits and projects for which these permits will be obtained during the implementation of the funding agreement, provided that the schedule for their acquisition and implementation falls within the timeframe of the relevant support program. 3. Poland: a two-step approach used for both the 2014–2020 Cohesion Policy programmes and the RRF. Based on simplified project information in the first stage, projects are organised into pipelines, enabling an appropriate funding application to be submitted in the second stage. Project lists (indicative lists of projects) also ensure that projects are allocated to different support programmes, avoiding the double financing of tasks assessed in stage 1 (demarcation by indicative lists of projects).
Lack of Resources and Support for the preparation of a funding application	
DSOs often do not have the internal capacity and expertise to prepare applications comprising hundreds of pages and supporting documents. Increased proposal preparation support	**Increased proposal preparation support through a widened role of NCPs** and dedicated technical assistance schemes from the EIB (similar to the Innovation Fund TA support to unsuccessful applicants). Information events and bilateral meetings could be organised by the European Commission and the NCPs in each Member State on an annual basis. Model projects and their lessons learnt should be presented on a regular basis

4.2 Regulatory treatment & Incentives

The questionnaire revealed that most European NRAs neither recognize EU funding in the RAB nor provide incentives for applying. It emerged that there is a strong case for establishing a more balanced approach to how public support is treated across Member States, as failure to recognize these costs acts as a general disincentive and disproportionately affects smaller DSOs with limited internal capacity.

In fact, many surveyed DSOs stated that the current regulatory frameworks in their countries act as a disincentive to applying for EU funding, an issue compounded by already burdensome application procedures.

Two main concerns stood out:

1. **Application costs**: Applying for EU funding requires a significant investment in both human and financial resources, that are often not recognized. While it is reasonable for DSOs to bear the risk of applications that do not meet the established criteria, those that are successful should be allowed to recover related costs through network tariffs. Failure to recognize these costs acts as a general disincentive and disproportionately affects smaller DSOs with limited internal capacity.

2. **Regulatory imbalances**: Excluding EU-funded CAPEX from revenue regulation while recognizing the resulting increase in OPEX creates a structural distortion. This misalignment can skew efficiency benchmarking, making DSOs that access public funding appear less efficient due to higher OPEX without corresponding CAPEX.

To address these issues, an important regulatory tool could be to introduce mechanisms to share the benefits generated by these public funds between consumers and DSOs. As with any incentive, it is important to strike a balance between galvanising DSOs and passing benefits on to consumers. Since these mechanisms aim at ensuring that customers obtain the benefits of the publicly funded asset while the DSOs efficiently operate and manages them, those mechanisms that ensure a division of the funds between consumers and DSOs would have superior properties over those that allocate all those benefits to one of the parties (e.g. whole pass through to consumers would disincentivize DSOs to apply. Currently, some Member States have introduced mechanisms moving in this direction (even if not necessarily strongly). Examples of these mechanisms are:

- **Czech Republic** allows full cost recovery through regulatory depreciation of EU-funded investments. Poland and Slovakia apply similar approaches, in this case these costs do not enter into the RAB, but DSOs are allowed to recover capital costs over the asset's useful life even if the investment was publicly funded.
- **In Italy**, EU funds are not included in the RAB but instead generate a 10% increase in regulated income based on the amount received.
- **Hungary** adopts a hybrid model, where around 50% of EU-funded investments are recognized in a secondary RAB that does not receive returns on capital.
- **Romania,** since 2021, has implemented a mechanism granting a 2% return incentive for investments made from DSOs' own funds in projects co-financed by non-reimbursable EU grants.

Not all these mechanisms will be equally effective (or even effective), but they are steps in the right direction. Given the characteristics of the different Member States and their current starting position, different approaches could be utilised to reflect these differences.

In conclusion, regulatory frameworks should be predictable, supportive and provide stability for long-term investments: Approaches that allow regulatory depreciation of EU-funded assets, or alternatively provide return-on-capital incentives, would promote a more consistent and equitable regulatory environment, ultimately encouraging DSOs to apply for EU funding

4.3 Improving access to EU funding for DSOs

Improving access to finance is a key priority in the Grids Action Plan with Actions 1 (PCI projects), 3b (the EC, with DSO Entity, to reinforce their support to the design and submission of PCI applications for smart grid projects), 9 (strengthening dialogue to address financing obstacles) and 10 (increasing visibility on EU funding opportunities for EU funding programmes) tackling this topic. [3]

There are roughly 2.500 DSOs in Europe, operating in regulated environments. **Fragmentation of the DSO sector means that** coordination and aggregation of interests and coming funding topics is difficult (specially for small and medium size DSOs). Moreover, while the possibilities to finance grid projects are possible within national European Regional Development Fund programmes and in the Recovery and Resilience Plans, our survey showed that very few Member States have developed funding schemes for grids.

The **Connecting Europe Facility (CEF)** Energy programme is the EU's primary instrument for supporting Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs) that improve trans-European energy infrastructure. The Programme was conceived with a focus on transmission-level infrastructure, but a thematic area of smart grids would finance DSO projects such as network automation, monitoring, and demand-side integration provided there is a relevance for. Although the latest reform of the TEN-E eliminated the obligation to include a TSO in the project and relaxed the cross-border criteria, the number of electricity smart grid projects remained low, with only 5 out of more than 166 projects included on the first PCI list under the revised TEN-E Regulation (2023). The second candidate PCI list, published in February 2025, features only six smart grid projects out of 370. Despite increasing relevance, DSO participation in CEF Energy remains limited. In the 2021-2027 programming period, 4 of the same smart grids projects have been supported from 2021. Reluctance on the part of project promoters to submit proposals include the following reasons:

- The high threshold for eligibility as a Project of Common Interest (PCI) or PMI.
- The sterilisation of funded assets in national regulations.
- The orientation toward transmission system operators (TSOs) and large-scale infrastructure.
- The administrative burden of complex applications and cost-benefit analysis (CBA) requirements.
- Limited capacity to form cross-border consortia or align with national regulatory frameworks.
- Limited budget of the programme
- Lack of support from the National Contact Points in the application process.
- Three months between the opening of the call for PCI/PMI projects and the deadline is not enough time for new applicants to submit proposals for candidates.

[3] To support in this access, DSO Entity organised a workshop in September 2024 aimed at providing DSOs with additional information on PCIs. The objective of this paper is to take the knowledge from that workshop and bring it one step further by proposing potential solutions to issues companies have identified when accessing public funding.

To facilitate these submissions, there are some measures that could be used to facilitate that DSOs have access to funding schemes, including the CEF Energy Programme:

- **Maintain long-term financing period:** Recent monitoring reports found that permitting within CEF-Energy projects took extremely long (up to 9 years). Moreover, large-scale energy projects require long-term planning, meaning that proposal development can last at least 12 months. If you factor in that most EU funding calls begin at the end of the first year (here 2028) then reducing the MFF cycle might cause pressure on the European Commission and Member States to "spend the money".
- **Aligning funding instruments with market-driven timelines** rather than rigid financial cycles will help with the management of these complex infrastructure projects: DSOs face unique challenges when implementing projects and they should be carefully considered. DSO projects, being highly technical and specialized, often encounter prolonged or disrupted equipment procurement processes. Also, in the event of significant funding opportunities, simultaneous orders could create delays and bottlenecks in keeping up with the implementation timelines.
- **Reoccurring calls and funding calls announced well in advance allow DSOs** to plan and prepare good quality project proposals: These two approaches provide DSOs ample lead time to organize projects and ensuring implementation periods reflect market conditions, even if spanning multiple financial frameworks will secure projects from being rejected from or not applying to instruments due to long implementation times. R
- **The growing size of the investment** should be reflected in the funds allocated to it: This increase in the dedicated budget could take two different dimensions. First, the budget for some of the current programs could increase. For example, CEF Energy Programme is the most important energy infrastructure funding scheme in Europe. The budget could be increased to ensure important projects can be implemented.4 Recognising that this increase in funding could face a challenge due to budget constraints, some of the significant revenues generated by the EU Emissions Trading System (ETS) could be earmarked for DSO projects, reinforcing the "polluter pays" principle by ensuring that funds generated from carbon-intensive industries are reinvested into electricity grid modernisation.

In addition, it is important that the funding is properly directed to ensure it achieves the relevant objectives. Therefore, more guidance regarding the distribution of these funds at the EU level should be provided to ensure that DSO-projects are adequately supported. As a result, some consideration should be given to the following issues:

- **The main objective of the TEN-E and the CEF Energy** programme is to "connect EU countries' energy networks, strengthening cohesion and developing solidarity and cooperation across the EU." Therefore, without a fundamental change in its objectives, this programme will focus on the delivery of those cross-border investments necessary for the energy transition by integrating the common market. Therefore, it would not consider those investments that are necessary at a national level which represent a large majority of those being undertaken by

[4] The ITRE INI report on electricity grids recommends that where funds are allocated to electricity generation project, a proportionate amount of these funds should also be spent on grids

DSOs. Since these investments are central in realizing core European energy objectives such as connecting decentralised energy resources and reducing fossil fuels imports, the currently too narrow objective of the TEN-E regulation could be enlarged to better acknowledge these elements.

- **Earmarking of EU funds for DSO-projects** inside existing programs not directly administered by the EU: It would be possible to earmark funds in programs that are managed at the national level under the Common Provisions Regulation (Cohesion and Regional Development Fund) or through alternative frameworks (Recovery and Resilience Facility). The beneficiaries of support from nationally managed funds highly depend on national priorities which do not necessarily include DSOs projects. For this reason, in the next MFF distribution grids must be clearly identified as a European priority to be supported in the envisaged National Plans.
- **It is imperative that the next Horizon Europe Programme** (FP10) and the **Competitiveness Fund** include grid-related topics, to develop common solutions and implement new grid technologies at EU-level. Smaller consortia should be accepted which will make getting involved in these projects more attractive.

5. Blended Finance for risk sharing and mitigation

Improving access to (public) finances can support broader objectives beyond individual projects, most notably, enhancing the overall financial reliability of the distribution sector. This issue was explored in a recent workshop organised by the EU DSO Entity in collaboration with the EIB, EBRD, consulting firms, and commercial banks, where the role of blended finance for financing DSOs investments via risk-sharing and mitigation was discussed.

According to several studies, achieving Europe's energy transition goals will require annual investments of approximately **€55–67 billion** in distribution grids between now and 2050[5]. This is well above current investment levels. DSOs can finance these investments through internal resources or external sources, including equity and debt. DSOs financed predominantly through equity are generally perceived as more expensive but less risky. Conversely, DSOs relying heavily on debt may appear riskier, as debt must be repaid or refinanced over time. When external investors evaluate whether to finance DSOs, several key factors come into play:[6]

1. **Ownership structure**: Two aspects are important—public vs. private ownership, and whether the DSO is a standalone entity or part of a larger group. Being part of a corporate group can improve access to financing due to economies of scale, but it may also introduce internal competition for capital (e.g. a municipally owned DSO might compete with transport, water, or gas services for funding).

[5] Eurelectric, 2024 Grids for speed. Available in https://powersummit2024.eurelectric.org/wp-content/uploads/2024/07/Grids-for-Speed_Report_FINAL_Clean.pdf

[6] For a more detailed discussion on these topics and the potential effect they would have on the company's capacity to accessing to funds, see DSO Entity's paper on accessing finance

2. **Size of the DSO**: The EU presents a highly diverse landscape, from a single DSO in Ireland to more than 800 in Germany[7]. Smaller DSOs often face greater challenges in accessing capital markets due to their limited scale and capacity.
3. **Approach to finances:** DSOs typically rely on corporate finance, as their investments often involve upgrading existing grids rather than building entirely new infrastructure. Being part of larger corporate groups, they usually access funding through a central entity that raises capital and distributes it across subsidiaries. This model is reinforced by the large investment sizes common in the sector, often in the hundreds of millions, making direct access to project finance difficult for small and medium DSOs.
4. **Credit rating**: A DSO's credit rating is a key factor in accessing debt markets. Lower ratings can be a major barrier. In a recent report, the European Court of Auditors assessed the implied credit ratings of 631 grid operators, finding that DSOs were more likely than TSOs to be at substantial or very high risk of defaulting on financial obligations.8

As highlighted during the workshop, many DSOs face a compounding problem: investment needs are rapidly increasing while debt levels soar, putting pressure on their credit scores. This creates a vicious cycle where DSOs risk their financial health while pursuing the energy transition.

Public-private financial instruments and partnerships can help break this cycle by acting as mechanisms for risk sharing and mitigation. Blended finance solutions, such as grants combined with loans, guarantees, or equity participation, can reduce the perceived investment risk for private financiers and improve the overall capacity of the DSOs of attracting the funds they would require delivering the energy transition. By absorbing part of the risk or lowering the cost of capital, public support makes projects more bankable and attractive to external investors.
These instruments contribute to breaking the investment bottleneck in two key ways:

1. **Improving DSOs' creditworthiness**: By reducing the risk exposure of a given project or company, public financial backing can help DSOs maintain or improve their credit ratings. This is particularly important in cases where soaring debt levels, combined with growing investment needs, would otherwise strain a company's financial profile.
2. **Enhancing access to capital markets**: With stronger balance sheets and improved credit profiles, DSOs are better positioned to attract private capital through debt or equity financing. This can significantly expand their funding base and allow them to scale up investments at the pace needed to meet electrification and decarbonization targets.

In this sense, public-private financial instruments are not just sources of funding but strategic tools to **mitigate investment risks, correct market failures, and accelerate the energy transition** by empowering DSOs to invest with greater confidence and financial stability.

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[7] https://www.eurelectric.org/wp-content/uploads/2024/06/dso-facts-and-figures-11122020-compressed-2020-030-0721-01-e.pdf
[8] European Court of Auditors, 2025, Making the EU electricity grid fit for net-zero emissions. Available in https://www.eca.europa.eu/ECAPublications/RV-2025-01/RV-2025-01_EN.pdf

Conclusions

This report confirms that while many DSOs are actively pursuing EU and national funding opportunities to support the energy transition, significant barriers still limit their participation. Chief among these is the **administrative complexity** associated with applying for and managing funding, which disproportionately affects smaller DSOs with limited internal resources. Simplification of procedures, greater technical support, and more realistic timelines are essential to ensure broader and more effective access to funding.

A second key issue concerns the **regulatory treatment** of EU funding. In many Member States, current regulatory frameworks do not adequately account for the role of public funding in DSO investments. This creates disincentives and can penalise DSOs in efficiency assessments or investment planning. A more harmonised, transparent, and supportive regulatory environment is needed across the EU to ensure consistency and fairness.

Looking ahead, several **general principles** should guide the design of future funding instruments. These include long-term predictability, proportional and fair access to financing, streamlined application processes, and better alignment with both national strategies and EU climate goals. Importantly, there is a **clear lack of instruments specifically tailored to the operational and investment needs of DSOs**, despite their central role in delivering the energy transition. In fact, as it stands, major EU public programs such as CEF energy have been conceived with only TSOs in mind and fund almost exclusively TSO projects. Addressing this gap should be a priority in future funding frameworks.

DSOs are critical enablers of Europe's clean energy future. Removing the current barriers to funding access, while creating dedicated, fit-for-purpose instruments, will be key to unlocking the scale of investment needed for a resilient, digital, and decarbonised electricity system.