November 2023

ASSESSING EU FUNDING PRIORITIES

Connecting the missing pieces to solve the DSO funding puzzle

E.DSO
SHAPING SMARTER GRIDS FOR YOUR FUTURE

Dowel innovation

Content

Executive Summary

This report presents the results of a quantitative and qualitative survey undertaken from September to October 2023 by DOWEL Innovation on behalf of E.DSO. The objective of the survey was to investigate how Distribution System Operators (DSOs) are currently accessing EU and national public funding to finance their projects and activities.

A total of 54 answers were provided to the online survey, collected from 39 different respondents from a total of 15 Member States of the European Union (EU) and Ukraine.

Additionally, five bilateral, semi-structured interviews were then carried out to obtain information of the DSOs' opinions on the possible shortcomings, issues and obstacles encountered as well as to explore possible future actions to address about funding opportunities at national and EU level. While key findings revealed that existing funding schemes, and in particular the Horizon programmes, have been experienced as well-suited mechanisms to set-up, for instance, pilot projects testing innovative solutions, the survey brought to light an inherent dissatisfaction about the availability and accessibility of funds to finance the operating and capital expenditure required for the transition towards a decarbonised and more decentralised energy system.

Overall, survey results identified major obstacles connected to proper guidance by Member States, burdensome administrative processes, a lack of transparency, unproportionate competition, unfavourable regulatory treatments, or unrealistic timelines.

The evidence gathered suggested several recommendations related to earmarking for DSO projects to stimulate the entire value chain, a greater role of the European institutions in overseeing the effectiveness of implementing initiatives and strategies and simplification when it comes to the regulatory environment as a whole. These inputs served as fundamental basis to articulate solid policy recommendations to EU policy makers in their endeavour to improve the development of the DSO funding landscape and the Multiannual Financial Framework (2028-2034) [1].

Key Findings

1

The consultation showed that, while Horizon funding is rated as the most positive EU funding programme among the respondents, Projects of Common Interest (PCIs) and the Connecting Europe Facility for Energy (CEF) have received the least favourable rating, with 30% of respondents indicating a "bad" experience and less than 20% expressing a "good" or "excellent" experience.

While generally considered a promising tool, major criticism referred to complicated application process, a lack of transparency in the practical application of the selection criteria for PCI status, high administrative burden, and a lack of alignment with the specific needs of DSOs.

2

DSOs have expressed concerns with existing funding schemes, in particular when it comes to financing operational costs (OPEX).

3

The survey revealed that the EU's guidance to Member States in securing funding needs to be significantly improved.

4

Major hurdles relating to funding mechanisms administered at national level include low funding levels and inadequate timelines; time consuming application and reporting processes, characterised by a high administrative burden; constraints associated with scope or budget, or funds provided as loans; unfavourable regulatory treatment of assets funded by public funding.

With respect to the latter, it was stressed that in many Member States, national regulations of energy networks require the neutralization of received funds within the revenue framework, thus presenting a major barrier when engaging with EU or national funding.

5

Recommendations to improve the EU administered funding schemes suggested to **effectively bridge the gap between Research and Development (R&D) initiatives and the market**; facilitate cross-border cooperation **without requiring physical interconnections** to support decentralised projects; **expedite progress and project readiness**; a less cumbersome and **more efficient application process**, potentially incorporating two-stage applications; a **recurring or rolling call mechanism**,, leaving DSOs more time to prepare a solid project proposal, and finally, introduce **funding rates that take into consideration small DSOs and municipal DSOs**, and **more favourable depreciation rules.**

Survey background

A quantitative and qualitative survey has been conducted between September and October 2023 by DOWEL Innovation on behalf of E.DSO. The survey has been extended to members of the EU DSO Entity[2] to increase the representativity of the results.

The survey aimed at investigating DSO's approaches to accessing EU and national funding programmes to finance their projects and activities as well as at identifying potential disparities across the sizes and countries of operation. It consisted in both an online survey and bilateral, semi-structured interviews. A total of 54 answers were provided* from 16 countries (Figure 1). Respondents were provided with a questionnaire encompassing 30 questions, covering four separate sections to collect information on the company, their use of a limited number of national and European funding schemes, and a final part to evaluate the suitability of available funds for DSO investment needs. Out of the 54 survey respondents, 19 answers were provided by large DSOs; 14 by medium sized DSOs and eight by small DSOs

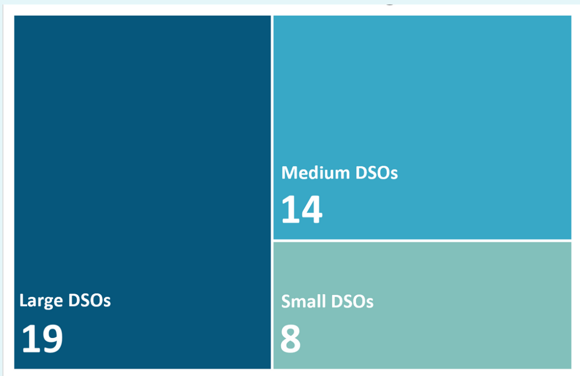
Size of DSOs by number of Connected customers

over 1.000.000

between 1.000.000 and 100.000

less than 100.000 connected customers.

Number of answers to survey according to size



Five bilateral, semi-structured interviews complemented the online survey to obtain additional qualitative information as well as feedback and recommendations. These insights have been integrated to the report to support and substantiate the results of the online survey.

*To avoid a bias in the analysis of the results, a maximum of 2 responses per respondent was taken into consideration, hence 41 responses were considered in the end (i.e., 16 very small networks, distinct but operated by the same local association, were grouped in two inputs, each with a different voltage level).

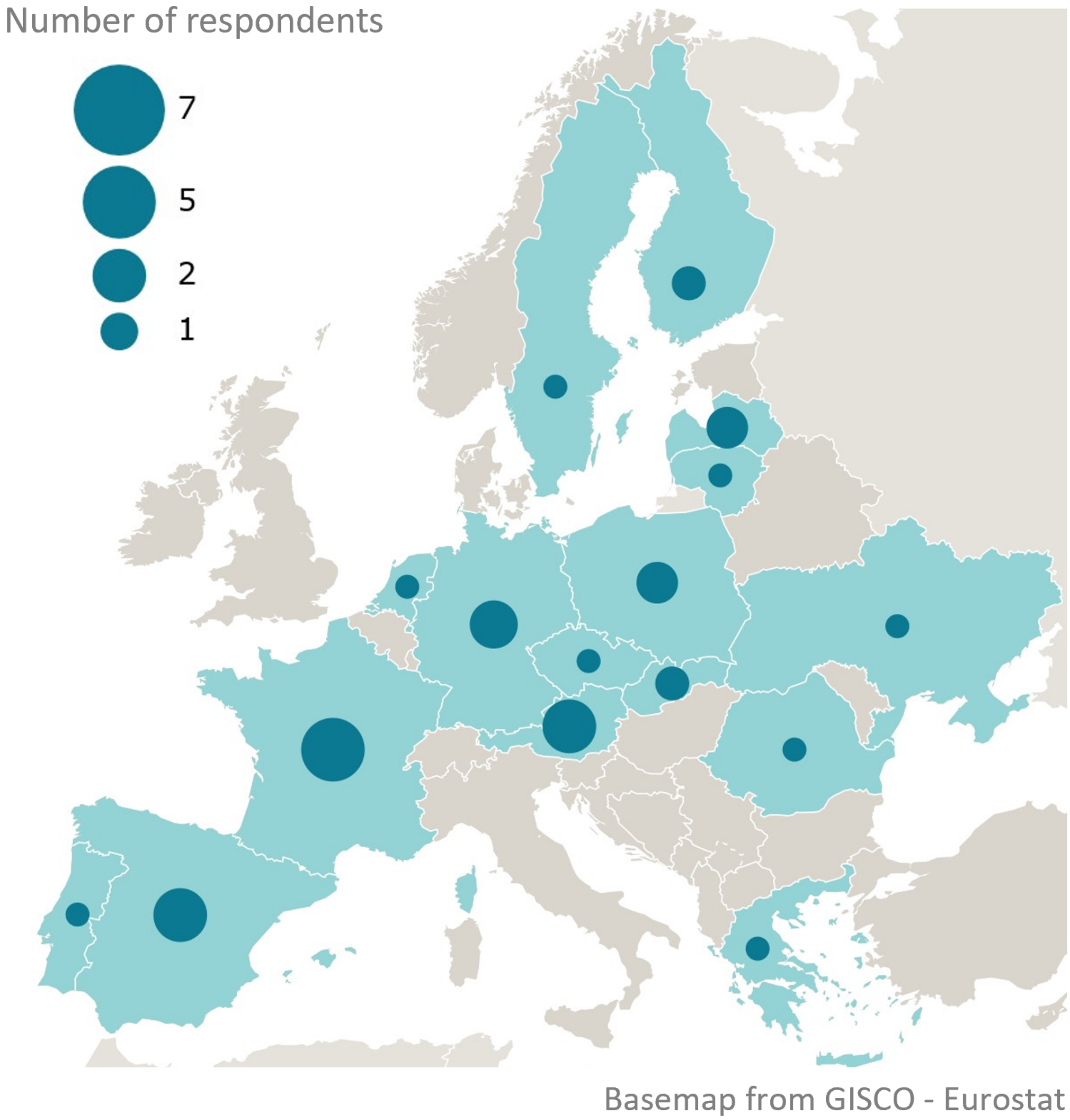


Figure 1 | Country of operation of respondents

Survey background

The survey reviewed a non-exhaustive list of publicly available funding, focusing on the most relevant programs for DSOs. It was decided to split the funds into two categories, namely the funding programmes administered at EU level*, and funding programmes administered at national level**.

Category 1 Funds administered at EU level	Category 2: Funds administered at MS level
Horizon programme	Funds covered under the CPR, including ERDF, CF and JTF
CEF Energy and PCI projects	The Modernisation Fund
Innovation Fund	National funds financed by the Recovery and Resilience Facility (RRF)
LIFE Programme	
ERA Net & Clean Energy Transition Partnership (CETP)	Other national funds

Table 1 | Public funding instruments covered by the survey

Although PCI is not a funding programme in itself, but is a category of projects which the European Commission identifies as a key priority to interconnect the energy infrastructure in the EU, the PCI status is considered as a separate element from CEF Energy in course of the survey. The PCI status is a prerequisite to be eligible for CEF energy funding, however, it does not automatically lead to actual funding through the CEF[3].

With respect to the second category, national administered funds under the

*Directly managed by the European institutions, meaning, the launch, the evaluation, the signing, monitoring, assessing and payments of projects and grants is done by the European Commission and its agencies directly. The application might require the creation of a consortium that involves more than one country. More information available here.

**Including both, funds that are managed in a shared manner. More information available here.

Common Provision Regulation (CPR)[4] have been included. The CPR encompasses, among others, the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the Just Transition Fund (JTF), on which this report focused. Above that, this section also includes the Modernisation Fund[5] and national funds financed by the Recovery and Resilience Facility (RRF)[6]. It is imperative to acknowledge that while these funding sources are addressed collectively, each one is distinguished by **unique characteristics**, such as:

- Funding allocations for grid-related initiatives under the RRF and REPowerEU[7] are **subject to prioritisation according to Member States preferences.**

- The **Modernisation Fund is only available in the ten lowest-income EU Member States,** comprising Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia. The allocation of resources from the ERDF is dependent on national priorities.

The DSO funding landscape today: Findings from the survey

Funds administered at EU level | Category 1

The results of the survey showed, that large DSOs submit the highest number of applications for EU funding opportunities, **with every single one of them having submitted at least one application in the past**. Out of eight small (to very small) DSOs, only two ever applied to EU funding (Figure 3). The **lack of knowledge regarding available funds**, as well as the **process and eligibility criteria** were stated as main barriers.

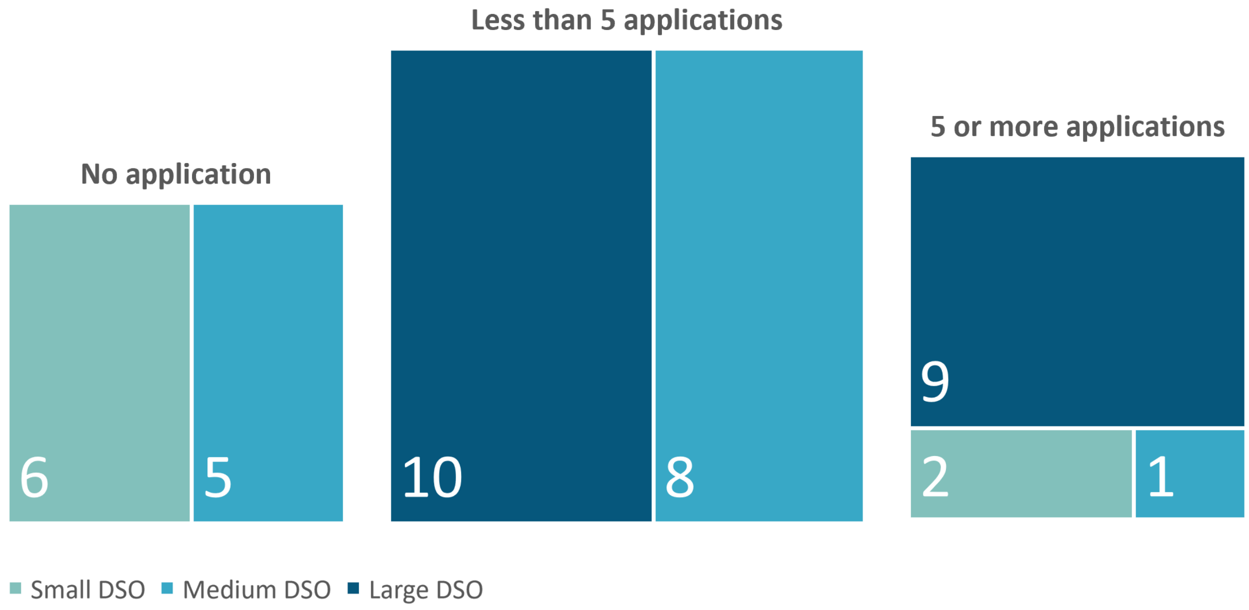


Figure 3 | Intensity of applications to EU funding in the last 10 years

As illustrated in Figure 4, the **main reasons for applying to funding administered at EU level**, according to the respondents, were the **opportunity to test innovative solutions at reduced risk, cross-border cooperation, scientific research cooperation and cooperation with stakeholders with diverse profiles** – such as industry or standardisation for example – **or accessing funds to cover capital expenditures** (CAPEX). Additional motives provided were the desire to establish government relations, the opportunity to increase visibility vis-à-vis policy makers and ambitions to improve sustainability.

The DSO funding landscape today: Findings from the survey

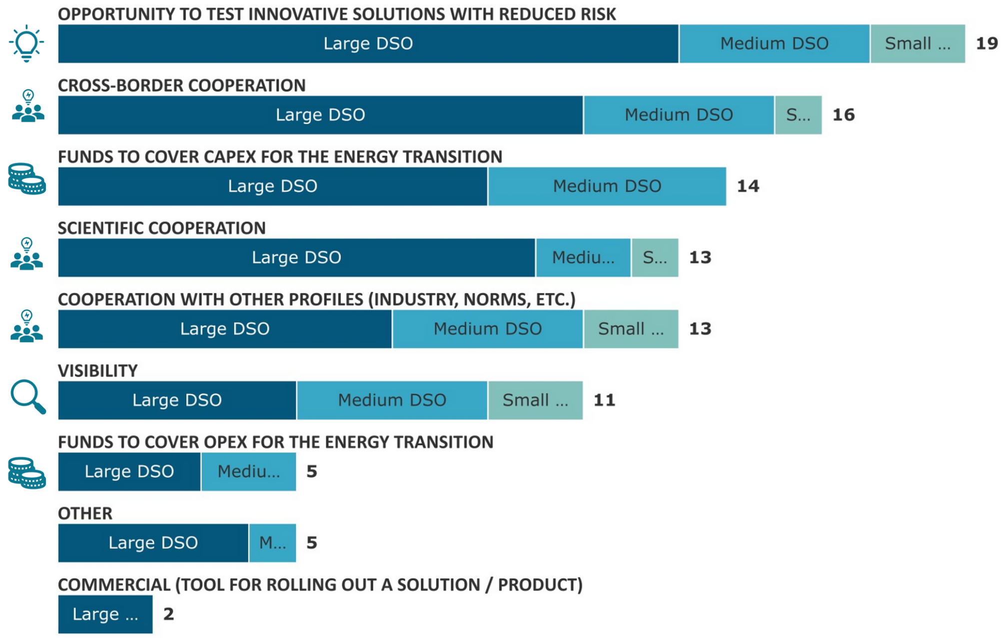


Figure 4 | Reasons to apply for funding administered at EU level

> EU funding helps us to speed up the implementation of our projects, and to accelerate the piloting of innovative solutions.
>
> **Wiener Stadtwerke Competence Center EU Funding, Austria**

> Our project funded by Horizon Europe gives a unique opportunity to access new knowledge thanks to scientific cooperation and the cooperation with other countries.
>
> **AB ENERGIJOS SKIRSTYMO OPERATORIUS, Lithuania**

Among all EU funding opportunities covered by the survey, **Horizon projects have been the main funding instrument over the past decade for DSOs**, with 24 of the surveyed DSOs having submitted applications at least once. Among the respondents, ten DSOs applied for PCI status. DSOs have also pursued alternative funding instruments, such as the Modernisation Fund, CF, Living-In-EU, European RDF, RRF, and CEF Transport (Figure 5).

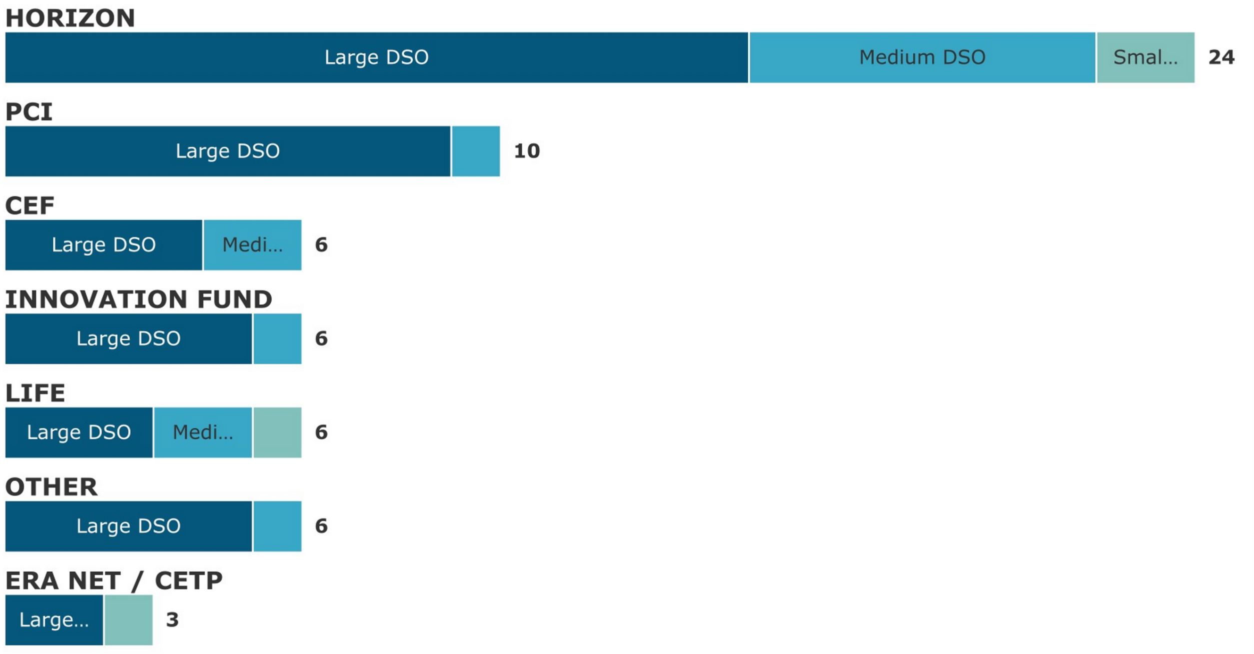


Figure 5 | Favoured funding instruments (at least one application submitted)

The consultation showed that, while Horizon funding is rated as the most positive EU funding instrument among the respondents, **PCI and CEF have received the least favourable rating, with 30% of respondents indicating a "bad" experience and less than 20% expressing a "good" or "excellent" experience**.

DSOs who applied to **Horizon funding** deemed it as "well suited" and well-focused despite rather low success rates. Nevertheless, it was pointed out that **consortia sizes are often too large, and equipment depreciation rules are unfavourable.** Horizon projects require **strict planning, which may conflict with the innovative nature of the projects, leading to challenges in execution.**

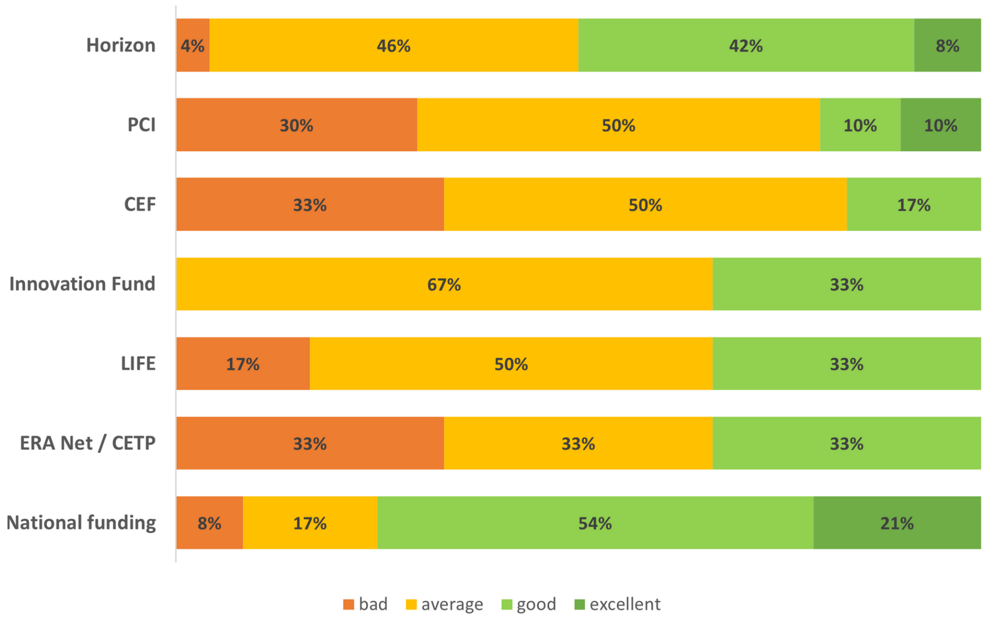


Figure 6 | Rating of experience with funding instruments

A few respondents stressed that the **exploitation of project results**, such as the scale up and commercialisation of projects, once the Horizon funding finishes, **should be improved** with the help of other types of funding that ensures the continuity of those projects.

While the PCIs were considered a promising instrument, some concerns were put forward:

- **A complicated application process**
- **A lack of transparency in the practical application of the selection criteria for achieving the PCI status**
- **A high administrative burden**
- **A lack of alignment with the specific needs of DSOs.**

Survey respondents pointed out difficulties to obtain PCI status for DSOs over the past years. The respondents shared the same concerns about the **CEF Energy** funding as in the section above, partly mentioning **a shift in the European Commission's priorities in allocating funding.**

With regards to the **Innovation Fund**, respondents underlined a highly complex application process with stringent requirements. Other comments referred to fierce competition and a disadvantage in terms of DSO's compatibility to apply to this fund, compared to other stakeholders. As such, the thematic areas align closely with DSO goals, however, DSO projects, particularly those led by municipal DSOs*, seem to be considered less competitive to Carbon Capture, Utilization, and Storage (CCUS) projects in terms of budgetary needs, as well as their CO2 avoidance levels, and profitability.

> PCI has become too complex for DSOs, with applications being scrutinized in a completely different way. If big DSOs cannot succeed, small DSOs cannot even think about it.
>
> **E.ON Energidistribution AB**

*There are differences in the ownership structures of distribution system operators in Europe are due to the historical organization and the different roles of local/national authorities. While most DSOs own their network and have an operating licence from local/ national authorities, the situation is different in other countries. In Germany for example, DSOs may receive concession contracts for the operation of the grid. These are, however, only valid for a certain period of time. The public authorities remain the owners. See for more information here.

In terms of **success rates,** DSOs have enjoyed the highest success with applications to the LIFE programme and with national funding. The Innovation Fund is the most competitive instrument, with the least favourable success rate (Figure 7).

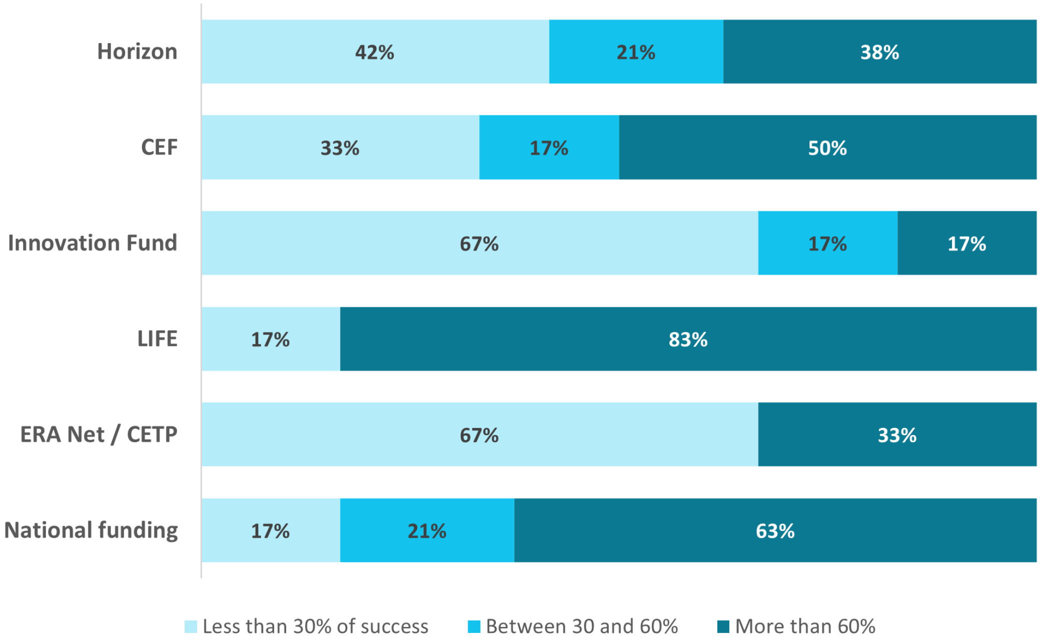


Figure 7 | Range of success rates

Respondents were asked to rate the **suitability of EU funding instruments to finance, both operational (OPEX) and capital (CAPEX) expenditure**, on a scale from 1/5 (very bad) to 5/5 (excellent).

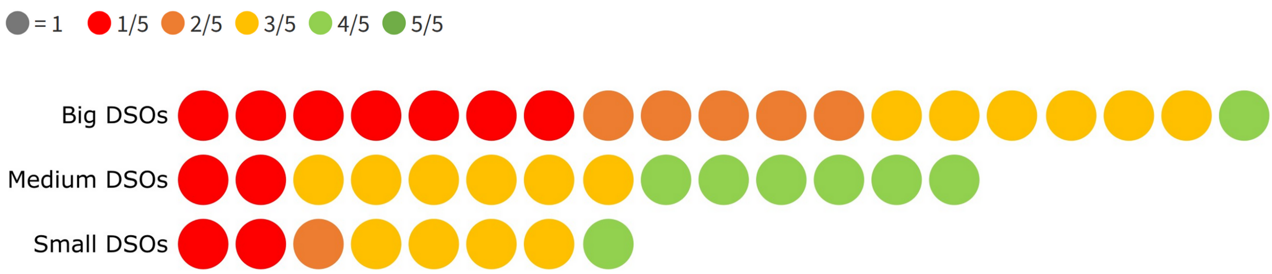


Figure 8 | How DSOs rate EU funding to finance OPEX on a scale from 1/5 to 5/5, with each dot representing one DSO

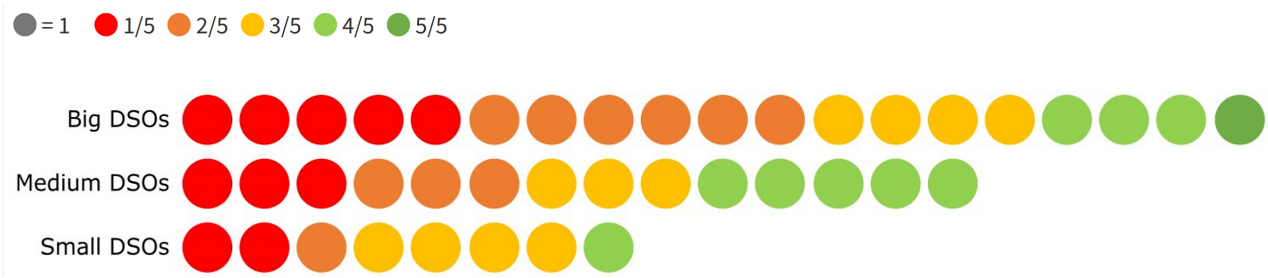


Figure 9 | How DSOs rate EU funding to finance CAPEX on a scale from 1/5 to 5/5, with each dot representing one DSO

A strong disparity can be seen between medium DSOs and large DSOs. Large DSOs, submitting the highest number of applications, express a notably lower satisfaction to finance CAPEX and OPEX (see Figure 8 and 9).

The DSO funding landscape today: Findings from the survey

Funds administered at MS level | Category 2

Funds covered within this section covered funds administered under the CPR, namely the ERDF, the CF and the JTF. The Modernisation Fund and the national funds financed by the RRF are also included.

As mentioned above, it is imperative to acknowledge that while this survey addresses these funding sources collectively, each one is distinguished by **unique characteristics**, such as:

- **Funding allocations for grid-related initiatives under the RRF and REPowerEU are subject to Member States preferences.**
- **The Modernisation Fund is only available in the ten lowest-income EU Member States comprising Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia.**
- **The allocation of resources from the ERDF is dependent on national priorities.**
- **National programmes, independent from EU funding resources may exist.**

The survey showed, that almost 30% of the respondents are not aware of mechanisms facilitating the integration of EU funding policies, such as REPowerEU and RFF, into national funding frameworks. Above that they are not proactively engaged in the monitoring of such developments. Only a few DSOs among the respondents established dedicated teams to actively engage with and provide feedback to the relevant ministries, either through direct communication or as part of an associations. Roughly half of the countries represented in the survey have incorporated grid-related projects into their Recovery and Resilience Plans (RRPs). Countries, such as as Greece for instance, included a REPowerEU chapter without including any reference to distribution grid projects.

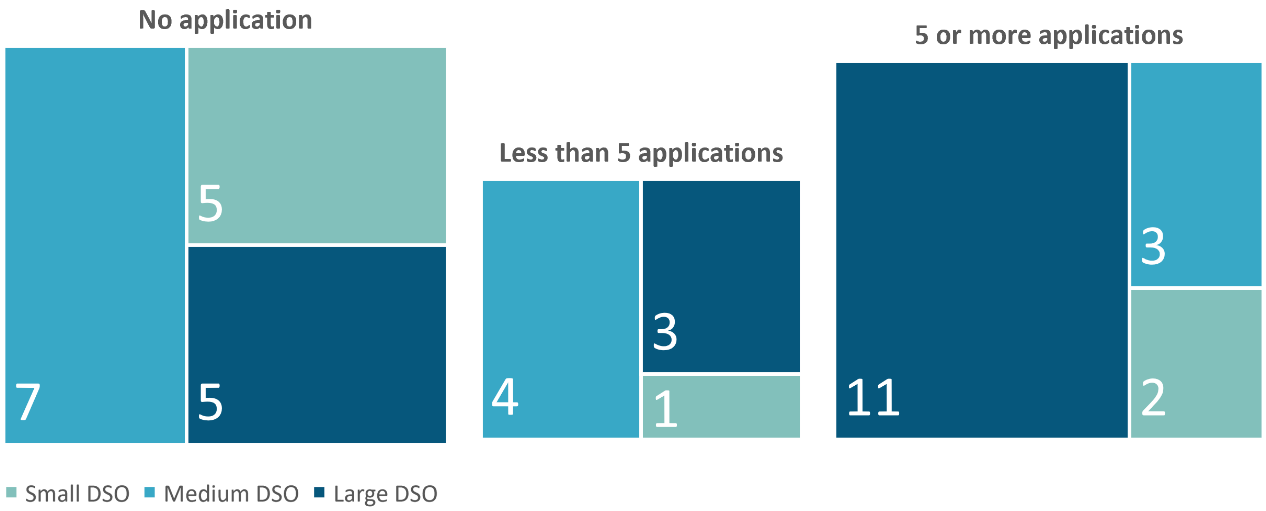


Figure 10 | How DSOs rate EU funding to finance CAPEX on a scale from 1/5 to 5/5, with each dot representing one DSO

Like findings about EU funding showed, **larger DSOs are also the ones submitting the highest number of applications on the national level**. It is noteworthy that five DSOs among the respondents, however, never submitted any application on the national level. This has been explained with, either a lack of suitable national programmes available to DSOs - or not suitable until recently - or a misalignment with national regulations*. Overall, 16 DSOs among the respondents applied five

More details under following section on hurdles in the funding administered at MS level times or more to national funding, including those funds financed by European resources. 17 DSOs among the respondents never applied to any national funding programme. The countries, in which survey respondents did not make any applications to national funding, include Finland, Lithuania, Slovakia and Sweden.

On the contrary to the findings on EU funding, **a strong disparity appears across Member States:** DSOs who applied to national funding opportunities, rate the experience in terms of application process as rather positive (Figure 6). Among those applications, some were submitted to national calls **financed indirectly by EU resources**, such as REPowerEU, the RRF, the Modernisation Fund and the European Regional Development Fund.

Respondents applied to:

REPowerEU	REPowerEU calls in Austria, Latvia, and Spain.
RFF	Calls funding through the RFF in Austria, Greece, Latvia, Portugal, and Spain.
Modernis-ation Fund	Modernisation Fund calls in Czech Republic, Poland, and Romania.
ERDF	Calls financed by the ERDF in France, Greece, Poland, Portugal, Romania, and Spain.

*Nine of them in Austria, Germany and Spain

The main reasons leading respondents to submit an application are similar to those presented with respect to funding administered at EU level, namely the opportunity to test innovative solutions at reduced risk, scientific research cooperation and cooperation with stakeholders of diverse profiles and the desire to receive funding to cover CAPEX. Visibility was mentioned as a prominent factor, featuring among the top five reasons.

Respondents were invited to rate the **suitability of funding instruments administered at national level to finance OPEX and CAPEX.** The rating scale has been the same as in the section above. Large DSOs, answered also in this framework with the lowest satisfaction level.

Figure 11 | How DSOs rate EU funding to finance OPEX on a scale from 1/5 to 5/5, with each dot representing one DSO

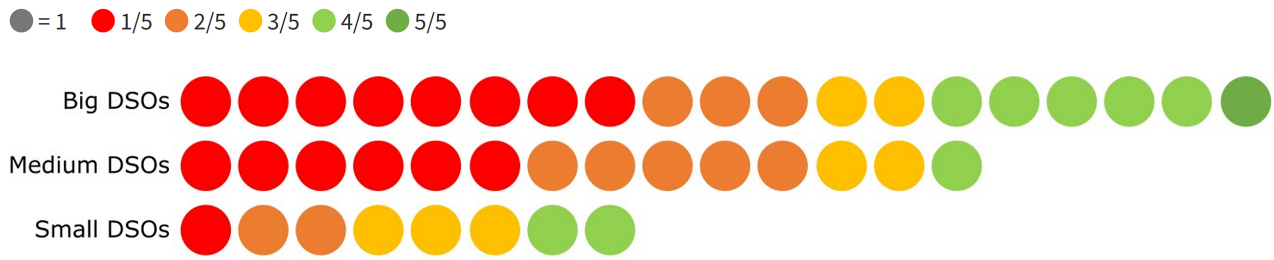


Figure 12 | How DSOs rate EU funding to finance CAPEX on a scale from 1/5 to 5/5, with each dot representing one DSO

Finally, the survey inquired about the DSO's satisfaction about the support extended by their respective Member States in securing EU funding. Over 50% of respondents rated this support with the lowest score of 1/5, while an additional 20% assigned it a rating of 2/5, **expressing an urgent need to improve EU guidance in this context.**

Hurdles to access funding administered at Member State level included:

- Low funding levels and inadequate timelines, such as calls stipulating project durations of a maximum of two years.
- Time consuming application and reporting processes characterised by high administrative burden.
- Constraints associated with scope or budget, limiting opportunities for DSOs. It was observed that in certain countries, DSOs have been excluded from the scope of major national funding programmes (for instance, the "Transformation of Industry" initiative in Austria does not enable DSOs to apply; national calls in Slovakia are available for DSOs only since 2023 within the extension of the NRRP – REPowerEU (RRF instrument).
- Instances of delayed payments,
- In some countries, such as France, national support programmes manifested in the form of loans necessitating repayment over an extended period often entailing guarantee procedures. These conditions significantly dampened the interest in participation in such calls, particularly among large companies and, notably, DSOs operating within a regulated environment.
- In other countries, such as Sweden, Finland, and Latvia, **DSOs stressed the unfavourable regulatory treatment of assets funded by public funding.** National regulations of energy networks require the neutralization of received funds within the revenue framework, thus presenting a major barrier when engaging with EU or national funding.

The DSO funding landscape today: Complementary insights bilateral interviews

EU administered at EU level | Category 1

DSOs participating in bilateral interviews provided additional insights into the existing EU funding landscape and its shortcomings for DSOs, and pointed out several elements that would need further improvement to develop a DSO-friendly framework.

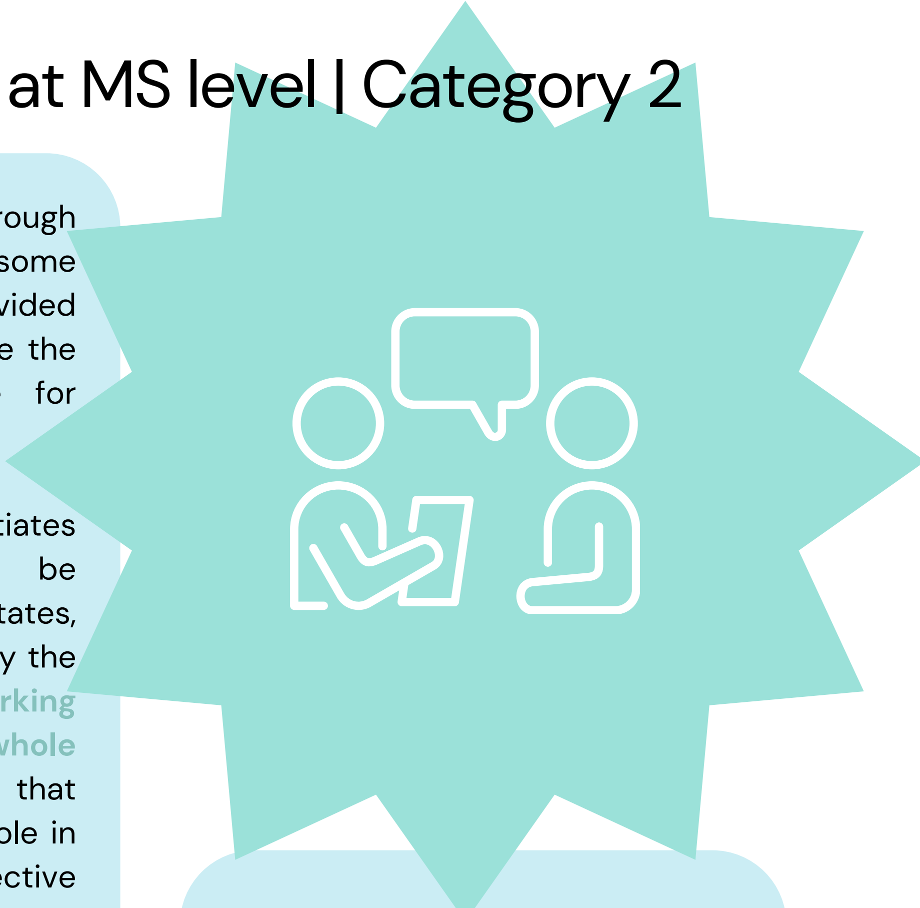
To begin with, such a framework should **effectively bridge the gap between Research and Development (R&D) initiatives and the scale up** as well as the replication of project results. **Streamlined procedures** are recommended with respect to the cross-border dimension, designed to facilitate **cross-border cooperation** without requiring physical interconnections. Such an approach would support decentralised projects, like those found in the Horizon programme. To expedite progress and project readiness, a less cumbersome and more efficient application process is favoured, potentially incorporating a **two-stage application process.**

A recurring or rolling call mechanism is recommended, leaving DSOs more time to prepare a solid project proposal, as DSO project timelines can take several years to mature.

Finally, **funding rates** should be more supportive of small DSOs and municipal DSOs, with more favourable depreciation rules for assets, but also covering operational costs. Several DSOs highlight that the transition to a decarbonised and more decentralised energy system requires additional skilled staff, an increased local presence as well as the deployment of new software to operate the grid, hence **increasing operating costs.**

The DSO funding landscape today: Complementary insights bilateral interviws

EU administered at MS level | Category 2



The insights collected through bilateral interviews with some respondents provided recommendations to enhance the existing funding landscape for DSOs at Member States level.

In instances where the EU initiates new programmes to be administered by Member States, such as EU funds governed by the CPR, there should be **earmarking for DSOs to stimulate the whole market.** It was pointed out, that the EU must play an active role in overseeing an effective implementation of initiatives and strategies mentioned above.
This oversight entails **providing clear guidelines on the calculation methodologies**, including scenarios and hypotheses on replacement costs, wherever applicable. Funds administered at Member State level should be designed in a way that makes them more accessible to DSO. They should be characterised by **realistic timelines** for energy projects and higher funding rates.

However, the strongest emphasizes among respondents lied on **simplification needs when it comes to the national regulatory environment**.

The imperative is to cultivate a shift in policy makers' mindsets, recognizing that DSOs cannot singlehandedly secure all necessary financing for the energy transition, particularly in relation to renewable energy asset connections from tariff-based revenue streams.

Interested in more?

Find our Policy Recommendations here:

References

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