

Guide on EU Financing and Funding Instruments for DSO projects

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:

- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

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Executive summary

This report presents the set of European funds that can benefit DSOs and assesses the use made of these funds in recent years. Thanks to the feedback from numerous companies, Eurelectric could make several qualified observations and recommendations:

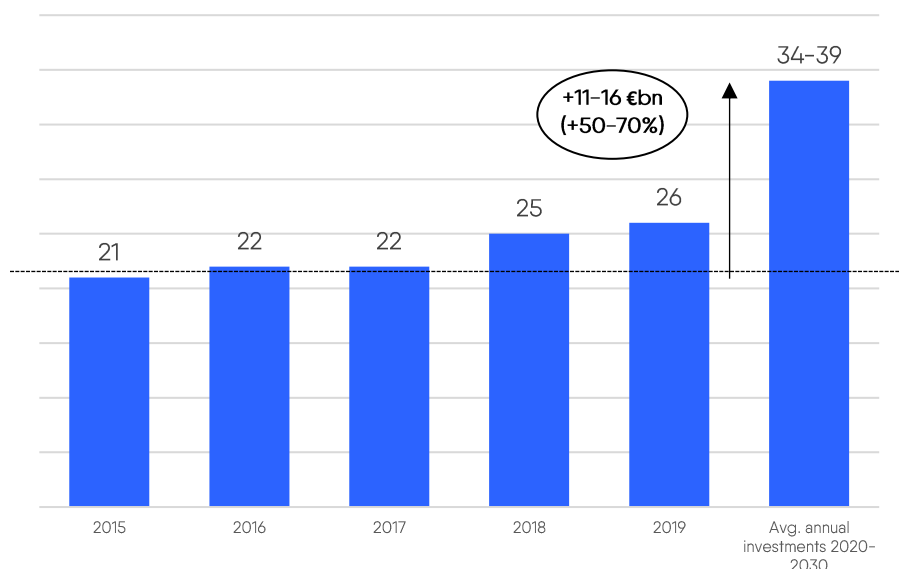
- The key role of DSOs to enable a cost-efficient energy transition should be fully taken into account in **national development and recovery plans to enable needed investments in the power sector**. The attribution of regional funds is conditioned by these plans and available European funds should fully benefit all European DSOs.
- European funds are used for punctual and specific investments by DSOs. Their purpose and character usually differs from the bulk of investments remunerated by tariffs. Consequently, national regulation should recognise European funds as tools for such punctual investments and **should not deduct the funds from the DSOs RAB or impose any artificial caps**.
- **The TEN-E revision** should significantly increase opportunities for the deployment of smart grids at all voltage levels to enable the integration of renewables, support the development of e-mobility and electrification of heating & cooling.
- Some European Funds fail to support DSOs investment in small countries or countries with low GDP levels when they should be fully included to allow an efficient energy transition across Europe. Thus, **eligibility criteria should be more tailor-made to fit with the needs of every Member States**. This includes the size of the projects and the level of innovation.
- For most funds, the application and evaluation processes are too long and resource-intensive, preventing DSOs from considering their use. Thus, **the process before the signature of the funds should be streamlined with a two stage procedure** allowing promoters to test their ideas without devoting too many resources.
- Access to information about the opportunities offered by each fund is a first barrier to the optimal use of European funds by distribution system companies. A first step to remove this barrier should be the creation of **an information tool with a list gathering all grid projects which have already benefitted from European support instruments**.

Introduction – Purpose of the revised guide

European Distribution System operators (DSOs) will encounter a massive need for investment to enable the Energy Transition and ensure the security of supply and automation of the distribution grids. EU funding can be seen as a potential tool that would decrease the cost of capital for distribution companies to further trigger investments in projects and alleviate the potential increase of tariffs which could result from enhanced investments. It may also bring needed funding in some countries where return on capital is not remunerative enough to attract new investments and speed up investments where regulatory and financing gaps exist. EU funding could also serve as catalysts to attract further funding from the private sector and other national public sector stakeholders (public investment banks, etc.).

Many EU funds exist today under different forms, but analysis is lacking whether funds are adequately used by DSOs and whether they are sufficient. This revised version of the previous EU funding guide in 2020 aims to close this gap.

EU27+UK annual investments in power distribution grids
and key drivers
(nominal €bn; 2015-2030)



SOURCE: [Connecting the dots study](#)

The European electricity sector is the key player for the European Green Deal to be achieved. The Commission recently published its 2030 Climate and Energy Framework with targets of at least 40% renewables in the 2030 electricity mix and a massive deployment of e-mobility. The possibility of reaching such targets is conditioned by the investments made in the distribution networks, which are essential for a cost-efficient integration of renewable energies in the European power system. European financing and funding instruments (Cohesion and regional funds, Connecting Europe Facility, InvestEU, Horizon Europe) have recently been revised under

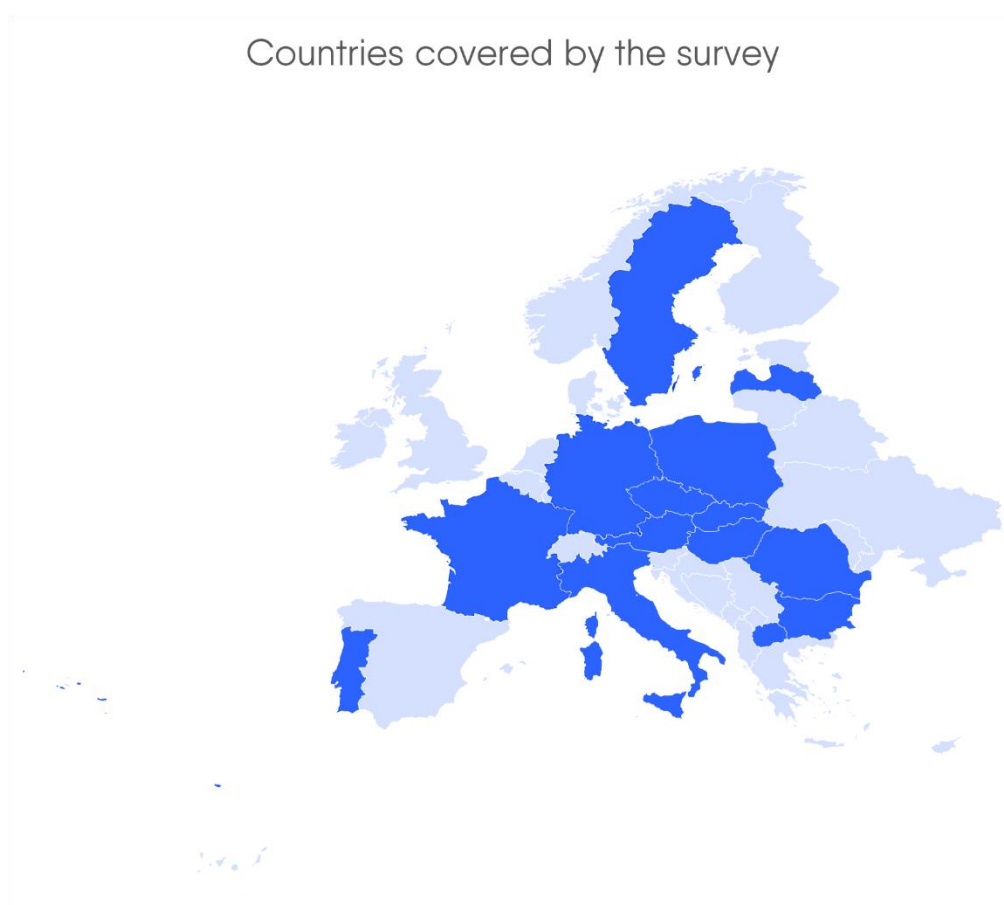
the negotiations for the 2021-2027 budget and the revision of the Trans-European Energy Network (TEN-E) Regulation is also underway to align the identification of priority infrastructures projects with the transformation of the energy system.

It is therefore an opportune time to take stock of recent changes to these funds and identify existing gaps with the distribution network investment needs assessed in the Connecting the Dots study to achieve the Green Deal's climate commitments through electrification.

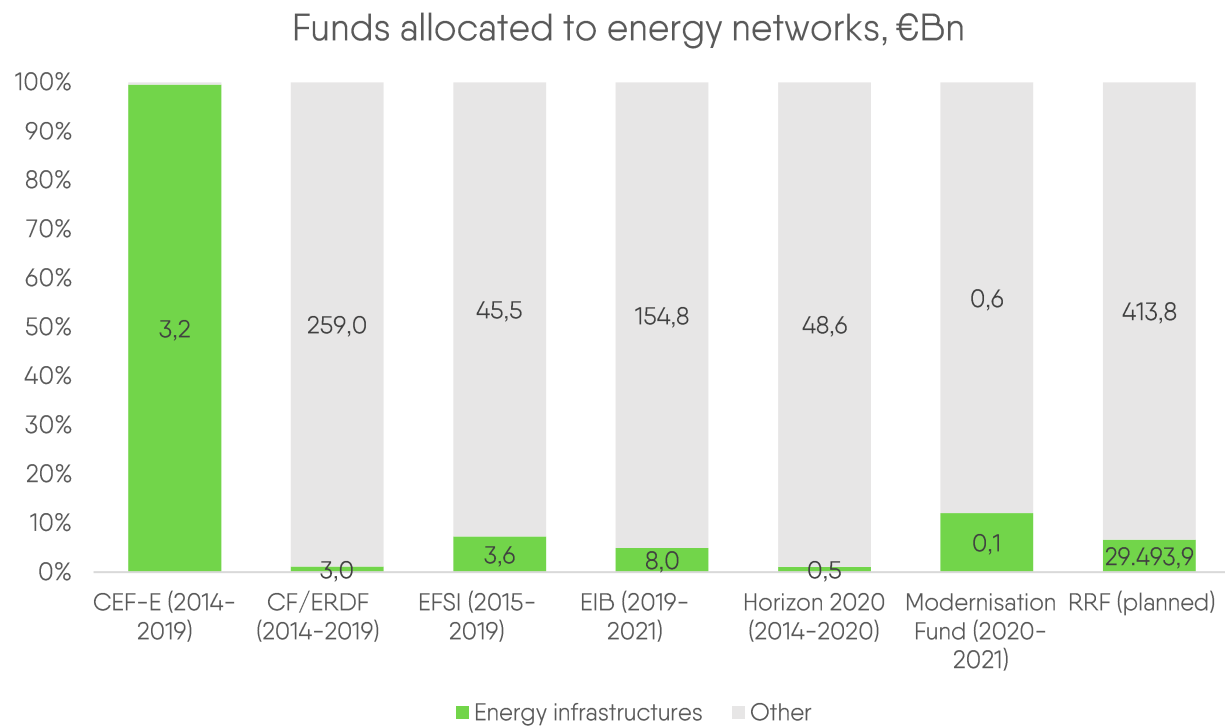
This guide is an update of the [one published in 2020](#) by Eurelectric including:

- Information on new and additional financing tools (Innovation Fund, Modernisation Fund, LIFE program, CEF transport and the Resilience and Recovery Fund).
- Policy recommendations drawn with the help of 11 European DSOs representing 120 million customers to achieve the full transformation potential of EU funds and prioritise spending to boost the modernisation and deployment of grid infrastructure.

This update aims first to inform on the EU available funding for their projects, to identify the type of financing tools and the conditions of eligibility (grants, loans or guarantees). The second objective is to raise awareness of the need for better financing of distribution networks as well as of the gaps that currently exist between the needs of DSOs and the current reality of European funding practices (allocation times, consistency with the national regulatory framework, eligibility criteria).



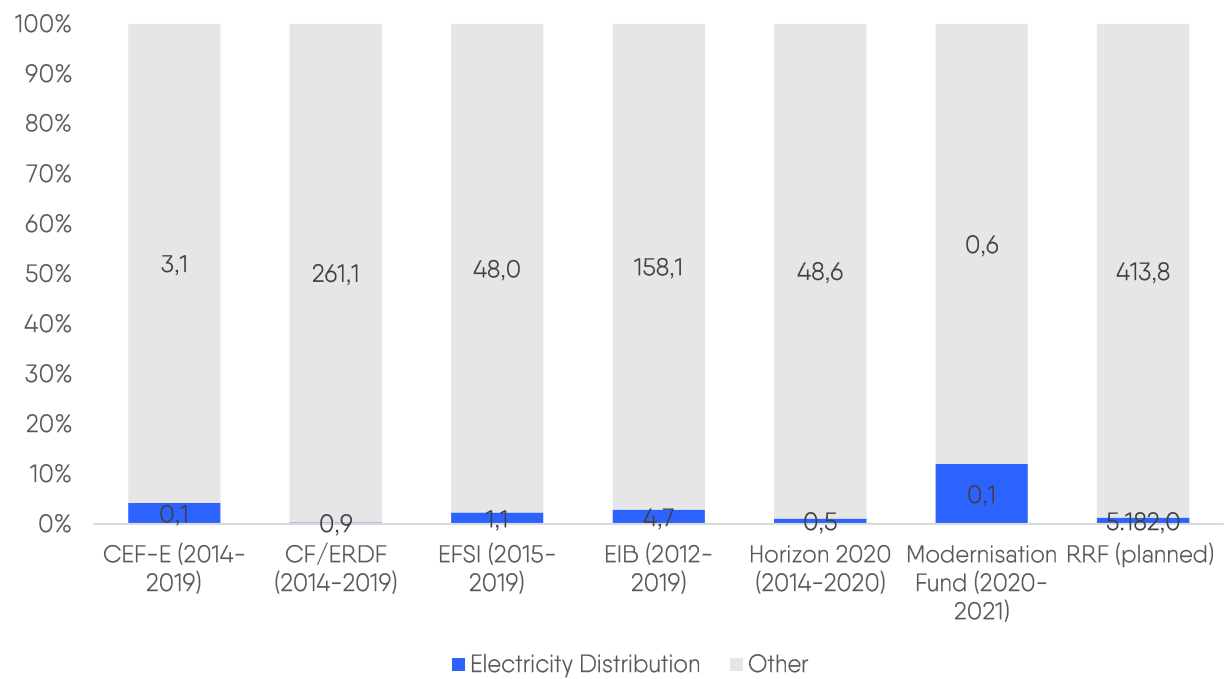
1. Accessible instruments for distribution grid projects



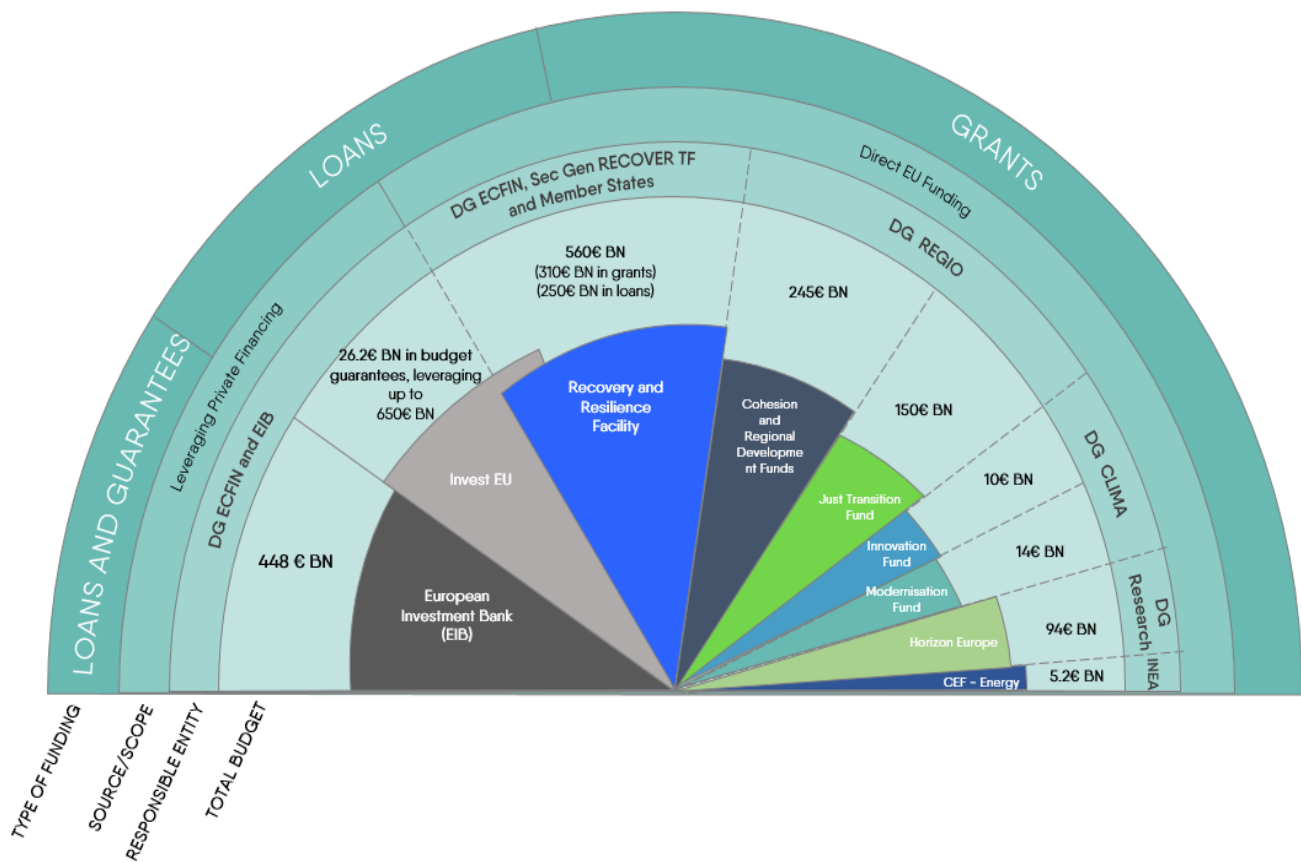
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¹ This includes electricity and gas transmission and distribution assets

Funds allocated to distribution grids, €Bn



Overview of EU funding instruments for electricity projects, including grids (2021–2027)



Source: European Commission and EIB

SUMMARY OF THE DSOs FUNDING TOOLS

Innovation	Horizon Europe	€ 95,5 bn 2021-2027	- Horizon Europe is a funding programme dedicated to research and innovation. - The previous cycle had successfully supported DSOs providing them 61% (327€ M) of Horizon 2020's energy networks grants. <u>Example of projects:</u> development of new solutions supporting local network flexibility systems.
	Innovation fund	€ 20 bn 2020-2030	- The Innovation Fund promotes the commercial demonstration of innovative low-carbon technologies. - It is funded by the EU Emission trading system. The Fund is allocated through call for proposals published on the Funding & Tenders portal.
Connections & Cohesion	Connecting Europe Facility	€5,35 bn 2021-2027 (energy)	- Connecting Europe Facility provides grants to develop trans-European networks for transport, energy and digital. - During the 2014-2020 cycle, smart grids projects had received 4% of the budget, but the revision of TEN-E could enable wider support to DSOs. - As for CEF Transport It supports the deployment of recharging points. In this context, the DSOs have received €91 million (2014-2021). <u>Example of projects:</u> development of a smart grid (CEF energy), development of ultra-fast charging stations.
	Cohesion and regional funds	€240 bn 2021-2027	- Cohesion and Regional Funds provide grants to close the economic and social gaps between member states and between regions. - Funding for energy production and networks represented less than 4% of the budget, and distribution grids were granted 860 M€ (0.3% of the total budget 2014-2020). <u>Example of projects:</u> smart meters, transformers, substations, line upgrades.
Climate	Modernisation fund	€ 14 bn 2021-2030	- The Modernisation Fund is a funding program which provides grants to the 10 lower-income EU Member States to support them in their transition to climate neutrality. - A first disbursement decision of €304 million was made in August 2021 and supported 3 DSOs projects representing €77.5 million. <u>Example of projects:</u> deployment of smart-meters and the adaptation of the power distribution grid to E-Mobility.
	LIFE fund	€ 5,45 bn 2021 - 2027	- The LIFE program is entirely dedicated to environmental and climate objectives. - It provides grants through two sub-programmes, one for Environment and the other one for Climate Actions. - It supported 10 DSOs related projects representing €25 million which stands for 0,7% of the total budget. <u>Example of projects:</u> Adaptation of the power grids to birds protection.

Loans & Guarantees	European Investment Bank	€ 448 bn 2021-2027	• The European Investment Bank provides loans to finance large-scale projects, typically more than 25 M€. • The EIB is a good instrument for lending to DSOs: 3.3% of EIB loans (14.8 B€) went to distribution grids since 2012, more than for transmission grids or gas networks. <u>Example of projects:</u> refurbish and extend MV and LV networks, EV charging infrastructure, automation, and remote-control systems.
	InvestEU	€ 26,2 bn 2021-2027	• InvestEU brings together the European Funds for Strategic Investments and 13 other EU financial instruments. • It is, like EFSI, a guarantee system to mobilize private investment in 4 key areas including Sustainable infrastructure. • Energy was an important sector for EFSI (21% of its guarantees). Electricity networks were granted 1.5 B€ of guarantees, 3% of the total guarantees, but it is lower than gas networks funding (2.1 B€). <u>Example of projects:</u> modernization and extension of networks, roll-out of smart meters, renewables integration in grid.
Recovery	Recovery and Resilience Facility	€ 723,8 bn 2021-2026	• The Recovery and Resilience Facility (RRF) is the largest component of the European Union's landmark instrument for recovery from the coronavirus pandemic. • The RRF will provide grants amounting to at most €312.5 billion and loans amounting to at most €360 billion. • For each member country, at least 37% of the expenditure should be attributed to investments and reforms that support climate objectives, and 20% to the digital transition. • Electricity grids benefit could be between €5,1 bn and €6,8 bn. <u>Example of Italian national plan:</u> €4,1bn for strengthening and increasing resiliency of the power grids.

i) Funds dedicated to Research & Innovation

Horizon Europe (former Horizon 2020)

Horizon Europe is a funding programme dedicated to research and innovation. The budget of the fund is €95.5 bn granted through a multi-annual call for proposals. Horizon Europe is the successor of Horizon 2020 applicable for the 2021–2027 cycle. The previous cycle had successfully supported DSOs projects providing them 61% (327€ M) of Horizon 2020's energy networks grants.

Horizon Europe provides additional funding opportunities to DSOs as 35% of the total budget is dedicated to climate-related innovation and €13,5 bn will be allocated to the cluster climate, energy, and mobility.

What is Horizon Europe?

Horizon Europe funds research and innovation activities through multi-annual calls for proposals set in the [Work Programme](#). For the preparation of Work Programmes, the European Commission involves 19 Advisory Groups (including Energy) involving industry, research, and civil society representatives. The latest Work Programme (2020–2021) disposes of a budget of €13,7 bn, with €5,3bn€ for climate actions.

Horizon 2020 is based upon three main research areas, also known as “pillars”:

- The **Open Science pillar** (€25.8 billion) supports research infrastructures as well as research promoted by [Marie Skłodowska-Curie Actions](#) and the [European Research Council](#).
- The **Global Challenges and Industrial Competitiveness pillar** (€52.7 billion) which promotes research into 6 clusters including climate, energy, and mobility.
- The **Open Innovation pillar** (€13.5 billion) which goals are to foster European research in market-creating and foster synergies between business, research, and entrepreneurship.

Overview Horizon Europe impact

What type of projects can be financed?

Horizon 2020 provides grants through open and competitive calls for proposals. Any legal entity from the EU and associated countries is eligible for funding, provided that following minimum conditions are met:

- Applicants must represent at least 3 legal entities
- All participating entities must be independent of each other.

Subsequently, DSOs must comply with criteria for financial and operational capacity and exclusion detailed in Annexes A–C from the [General Annexes](#).

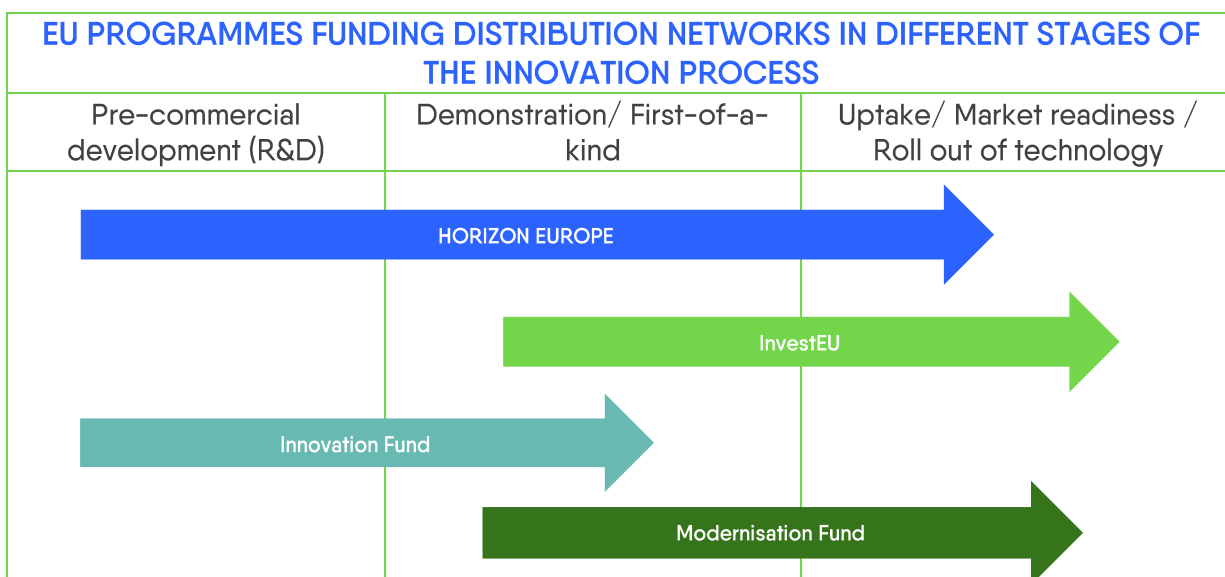
Among the activities generally eligible for grants under Horizon Europe, we can quote, among others:

- **Research and innovation actions (RIA)**. From 2014 to 2020, 33,3% of energy network projects in the EU have been RIAs and the funding rate amounts to 100% of eligible costs.
- **Innovation actions (IA)** focus on closer-to-the-market activities producing new or improved products or services (e.g. prototyping, testing, demonstrating, piloting, scaling-up etc.). From 2014 to 2020, 63,7% of energy network projects in the EU-28 have

been less and the funding rate amounts to 70% of eligible costs (except for non-profit legal entities, where a rate of 100% applies).

- **Coordination and support actions (CSA)** cover the coordination and networking of research and innovation projects, programs and policies. From 2014 to 2020, 3% of energy network projects in the EU-28 have been CSAs and the funding rate amounts to 100% of eligible costs.

Horizon 2020 is indeed characterised by a wide coverage of projects throughout different stages of the innovation process, from pre-commercial development to uptake. The table below compares this feature with other current European funding mechanisms for innovative energy and electricity distribution projects.



Example of DSOs projects

UNDER HORIZON 2020:

Until 2019, DSOs in several EU countries (including Enedis, E.ON, CEZ distribuce) received 17 M€ for the IA [InterFlex](#). The project developed new solutions supporting local network flexibility systems (demand response, grid automation etc.), preparing the distribution grid to new uses (e-mobility) while expanding renewable energy sources integration.

The IA [Coordinet](#) (Vattenfall, Iberdrola DE, E. ON, HEDNO etc) received 15 M€ to build large-scale demonstrations of innovative grid services through demand response, storage and small-scale (RES) generation. The project involves DSO, TSO, and consumers.

UNDER HORIZON EUROPE:

[Project to support improvement of the power grid](#) – The purpose of the project is to support improvement of the power distribution system regarding control, maintenance, and planning. The goal of this proposal is to decrease of energy losses and prepare of a guideline for investments in the distribution network. The estimated total value of the project is €1,5 million.

How to apply? Useful links

- To find the opened call for proposals, see the [Funding and Tenders portal](#).
- See also [the Horizon results](#) platform with beneficiaries results and innovations.

How did it benefit to distribution grids?

Between 2014 and 2020, Horizon 2020 granted 539 M€ to energy (electricity and gas) network projects, which amounts to 1.1% of the €49 bn contributions made by Horizon 2020 in the EU-28. Numerous calls for proposals for the 2021–2027 period have already been released. Among them, a certain number of DSOs related projects tackles, for instance:

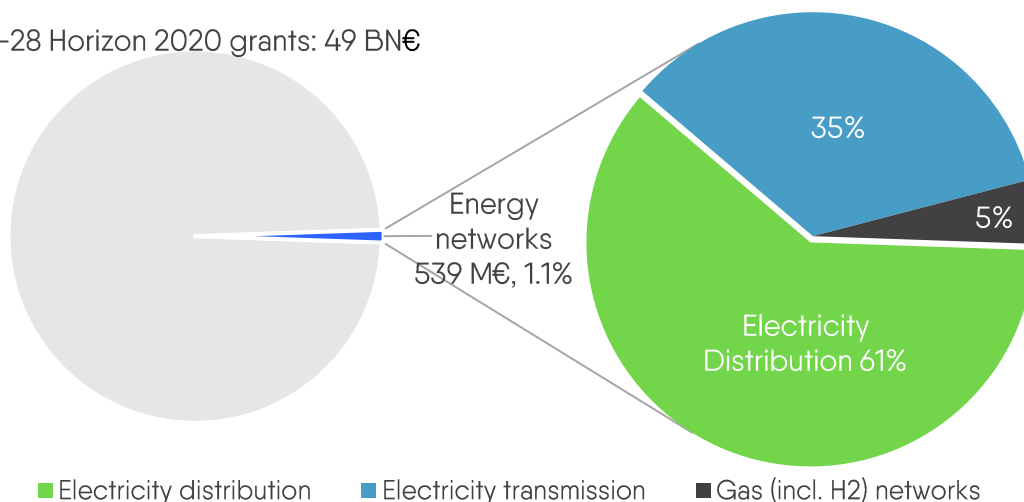
- Increasing energy system flexibility based on sector-integration services to consumers (that benefits system management by DSOs and TSOs).
- Reliability and resilience of the grid: Measures for vulnerabilities, failures, risks, and privacy.

Within energy distribution, the majority of H2020 funding (61%) went to electricity distribution, testifying the innovative potential of electricity DSOs. However, only 1,1% of H2020 was allocated to energy networks.

Share of Distribution grids funding by Horizon 2020

Source: European Commission.

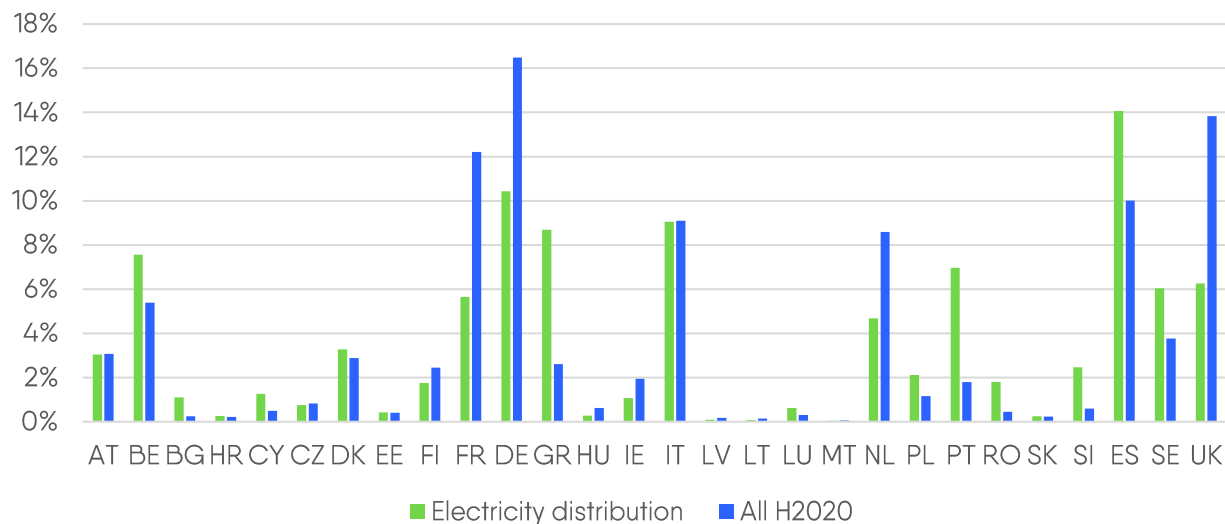
EU-28 Horizon 2020 grants: 49 BN€



- ➔ Within energy distribution, most of H2020 funding (61%) went to electricity distribution, testifying the innovative potential of DSOs.
- ➔ However, only 1.1% of H2020 funding has been allocated to energy networks. Considering the imminent challenges faced by DSOs and interested parties (e.g. renewables integration), this figure should increase in the Framework Program Horizon Europe in order to be able to achieve secure, clean and efficient energy targets.

Geographical breakdown of H2020 grants for distribution grids

Repartition of Horizon 2020 funding in the EU- (2014–2020)



Source: Eurelectric, retrieved from EU public data ([Horizon 2020 dashboard](#), June 2020).

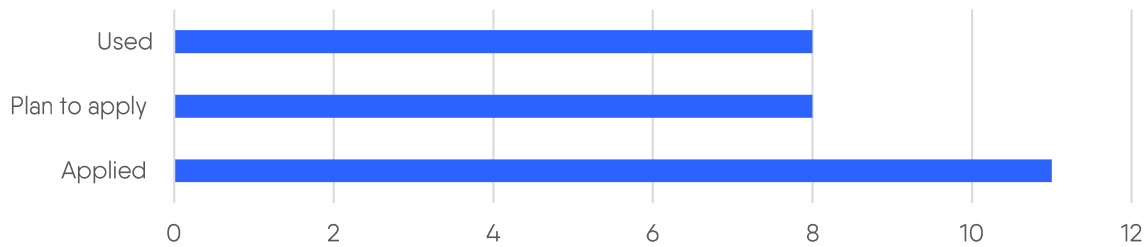
The repartition between electricity distribution related projects over Horizon 2020 funding is **balanced throughout** Europe. Yet in some Western European countries (notably Germany, France, the United Kingdom and the Netherlands) electricity distribution related projects tend to be financed less through Horizon 2020 compared to some Southern European countries (such as Spain, Greece and Portugal), where significantly higher shares of Horizon 2020 funding has been allocated to research and development in the electricity grid.

The **10 lowest income countries have also poorly benefited from Horizon 2020**, even though innovation in these countries is essential to achieve the objectives of the Green Deal.

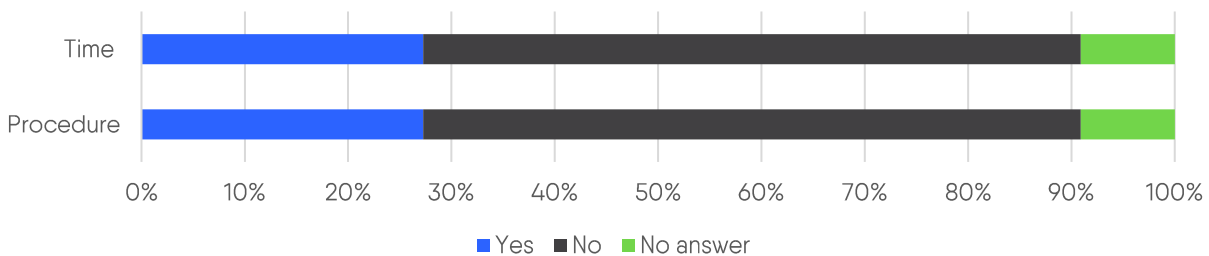
How did DSOs experienced Horizon 2020?

Our survey confirms that the Horizon Europe fund benefits the activities of DSOs. Indeed, 82% of the companies that responded have already benefited from it for one or more of their projects. The main obstacle for funding some DSO is a high level of competition among themselves: as some DSO projects are very popular, the competition between companies can be very high.

Have respondent DSOs already used or applied to Horizon Europe?



Are timelines and administrative procedure a barrier to use the fund?



For most of the respondents, **timeline and administrative procedures are not a barrier to use Horizon Europe**. In addition, DSOs welcome the simplified application process for the fund with the creation of a [one-stop shop portal](#) to search for opportunities and manage the process.

Relevance of the eligibility criteria



Companies that find the eligibility criteria too restrictive deplore the fact that the level of innovation required to benefit from the fund is too high for some countries. Thus, the fund, due to its eligibility criteria for innovation favors Member States which have a higher overall level of innovation in the distribution grid.

Thus, eligibility criteria are **not sufficiently adapted to the national specificities of each country**. The fund should be able to support research in each member country regardless of its initial level of innovation.

As highlighted in our distribution grids² in Europe, the DSO landscape in Europe is brad-varied and the level of modernisation uneven. European funds should be able to benefit all DSOs. We therefore

² See [Distribution Grids in Europe. Facts and Figures 2020](#).

recommend more tailor-made funding solutions to enable an effective energy transition in every Member States in Europe.

The Innovation Fund

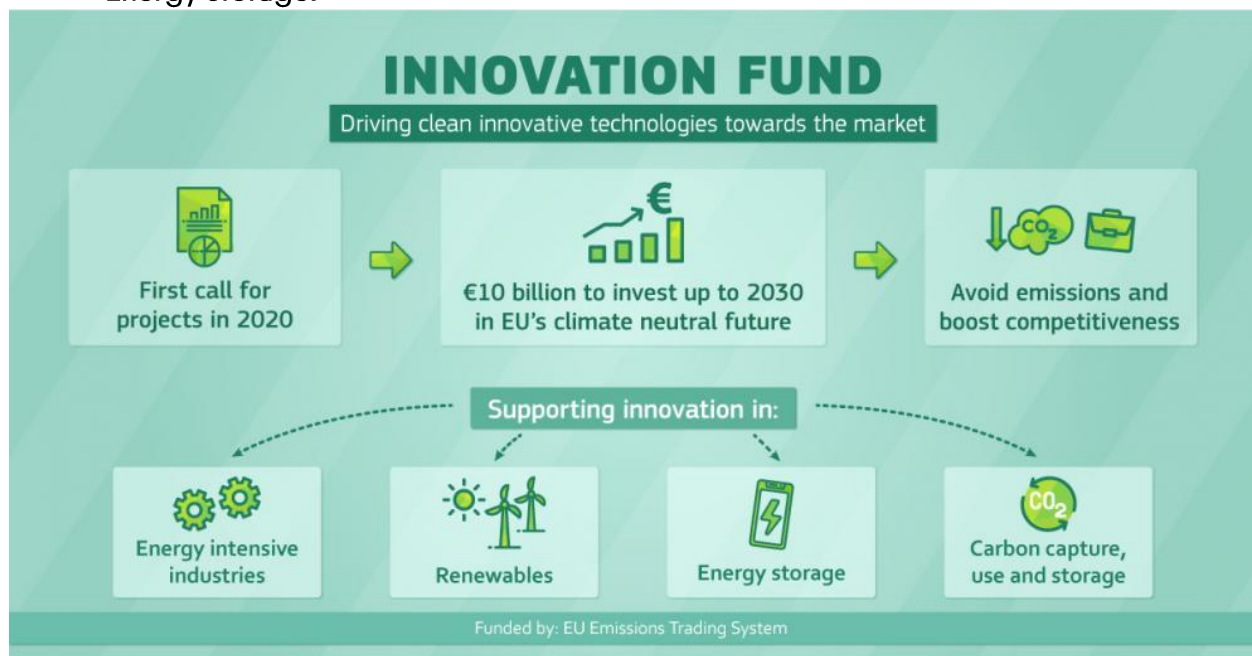
The Innovation Fund promotes the commercial demonstration of innovative low-carbon technologies through the granting of around €20 bn (depending on the carbon prices) over 2020–2030. It is funded by the EU Emission trading system. The Fund is allocated through call for proposals published on the Funding & Tenders portal. All the winners of the first call for proposals are not yet known, so it is difficult to estimate the benefits that this fund can bring to DSOs.

What is the Innovation Fund?

The Innovation Fund provides grants coming from the EU trading system for the demonstration of innovative and low carbon technologies. It aims at supporting businesses in investing into clean energy technology and industry to enhance economic growth and, employment and European technological leadership.

The budget for 2020–2030 is €20 billion (depending on carbon prices) allocated through calls for large and small projects in the following fields:

- Innovative low-carbon technologies and processes in **energy-intensive industries**.
- **Carbon capture, storage and utilization**.
- **Innovative renewable energy generation**.
- **Energy storage**.



Overview of the Innovation Fund impact

What kind of projects can be financed – eligibility criteria

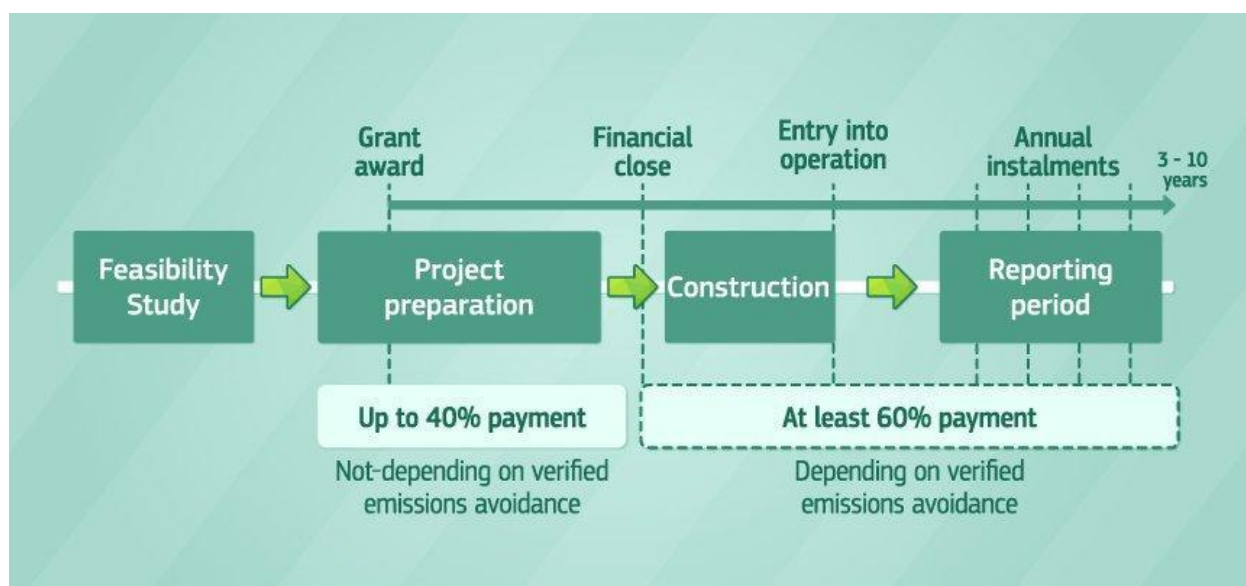
The Innovation Fund will support large scale projects through call for proposals published on the Funding and Tenders portal and small-scale projects. It will support up to 60% of the additional

capital and operational costs of large-scale projects and up to 60% of the capital costs of small-scale projects. The Fund is managed by the CINEA.

The selection of the projects will be done by the Commission based on the following evaluation criteria:

- effectiveness of greenhouse gas emissions avoidance
- degree of innovation
- project maturity
- scalability
- cost efficiency

The first list of projects for the 2020 call for proposals was drafted thanks to an Innovation Fund Tour of Workshops organized by the Commission in 2019. Criteria of the first call for proposals for large-scale projects were published on the [Funding and Tenders Portal](#) and the criteria of the call for the small-scale projects on the [small-scale projects tab](#).



How can this fund benefit to DSOs?

The Innovation fund is a recent fund. The first call for proposal was released in December 2020 and all the winning projects have not been released. It is thus difficult to quantify how much this fund could benefit to DSOs. However, the first list of [awarded small-scale projects](#) gives an overview of the successful projects.

Among this list, projects supporting vehicles to grid and intraday electricity storage for flexibility were supported by the fund. Thus, innovative projects from DSOs could benefit from this fund.

Intra-day electricity storage

Green the flex is a project supported by EVN aiming at integrating multiples platforms into one Virtual Power Plant to bring flexibility in electricity demand from both households and businesses into the market. The project will use remotely controlled home optimization devices

and existing communication channels from original equipment manufacturers to achieve load shifting potential and increase self-consumption.

ii) Funds to support the Cohesion policy and European interconnections

Connecting Europe Facility (CEF)

Connecting Europe Facility provides grants to develop trans-European networks for transport, energy and digital and finance non-viable projects that provide positive externalities. CEF Energy budget for 2021–2027 is €5.35 billion. During the 2014–2020 cycle, smart grids projects had received 4% of the budget, but the revision of TEN-E could enable wider support to DSOs. As for CEF Transport, its budget for 2021–2027 is €24 bn. It supports the deployment of EV recharging points. In this context, the DSOs have received €91 million.

For 2021–2027, 60% of the total expenditures of CEF will contribute to climate objectives.

What is the CEF?

[Connecting Europe Facility \(CEF\)](#) is one of the main EU funding instruments for infrastructure. It grants funds to develop trans-European networks in the fields of transport, energy and digital. The first funding cycle began in 2014 and ended in 2020 and the new one will last from 2021 to 2027. For 2021–2027, 60% of the total expenditures of CEF will contribute to climate objectives³.

In the energy sector CEF–Energy aims at funding infrastructure projects that:

- Support interoperability of EU transmission infrastructure,
- Boost the internal energy market and competition,
- Enhance security of supply of the EU,
- Boost integration of renewables and smart grids.

It supports the development of key cross-border infrastructure projects which are defined by the Trans-European Networks – Energy (TEN-E) Regulation:

- Budget is allocated annually through annual call for proposals. Yearly actions and objectives are defined by the Commission in a dedicated annual work program.
- The [European Climate, Infrastructure and Environment Executive Agency \(CINEA\)](#) publishes the call and do the eligibility check and the technical evaluation of the projects. The Commission evaluates the projects, makes the selection. Finally, CINEA manages the grants (See the process in Annex 2).
- On September 7th 2021, the Commission has launched the 2021 CEF Energy call for proposals, with a budget of 795 M€.

In the transport sector, CEF–transport aims at funding a Europe-wide network of transport infrastructures and innovation to enhance European territorial cohesion. It supports, among other projects, **the deployment of recharging stations for electric vehicles**. The financing of this type of project can benefit the DSOs as they are responsible for connecting these charging stations to the grid.

CEF–transports priorities are defined in the Trans-European Transport Network (TEN-T) regulation. It comprises the Core Network (most important connections to be completed by

³ See [Regulation establishing the Connecting Europe Facility and repealing Regulations \(EU\) No 1316/2013 and \(EU\) No 283/2014](#)

2030) and the Comprehensive Network to be completed by 2050. The process for defining and allocating the CEF–Transport budget is similar to that of CEF–Energy⁴. On September 2021, the CINEA has launched the first call for proposals of the new cycle, with a total budget of €7bn. One of the three pillars of the call is the Alternative Fuel Infrastructure Facility, its budget is €1,6 bn and it includes electricity fast-charging and hydrogen refueling infrastructure.

Overview of CEF impacts and perspectives.

What type of project can be financed? Eligibility criteria

CEF provides instruments – **blending instruments combining grants, loans, and guarantees** in cooperation with the EIB (loans) and InvestEU (former EFSI). It provides for instance Debt Instrument or Equity Instrument where private finance is lacking. See more [here](#).

CEF – Energy

CEF Energy is engineered to finance projects having positive externalities (such as security of supply, innovation, and solidarity) but lacking commercial viability.

During the 2014–2020 cycle, CEF–Energy has funded:

- Electricity transmission networks (for example, electric interconnection between Nouvelle Aquitaine (FR) and the Basque country (ES), 580 M€, expected in 2024), the Baltic states synchronization and **storage**
- Gas networks (gas interconnection Poland–Lithuania, 265 M€, expected in 2021)
- CO₂ networks
- Smart grids

Key criteria are the complementarity and EU added value: only energy projects that are not commercially viable and would therefore not be implemented even though they provide important socio-economic benefits at macro-regional level. Eligible energy projects are defined by the TEN–E Regulation⁵: only smart grid projects granted with the PCI label (see eligibility criteria to be a smart grid PCI in Annex 1) can further benefit from:

- Grants for studies (preparatory mapping, feasibility, evaluation and testing studies, site reconnaissance etc.)
- Grants for works (purchase, **supply**, deployment of software, systems, construction, installation services etc. if the following conditions are fulfilled as well:
- The project generates significant **positive externalities** (security of supply, solidarity, or innovation)
- Lack of commercial viability, according to the business plan or other assessments made by investors or the national regulatory authority.

The TEN–E regulation setting the criteria is **currently under revision**⁶ (after a proposal from the Commission in December 2020). The eligibility criteria for smart grids are in particular in this revision which should allow a better financing of DSOs projects.

⁴ See [Multi-Annual Work Programme 2021–2027](#) for [CEF transports and annexes](#)

⁵ See [Regulation No 347/2013](#) on guidelines for trans-European energy infrastructures, Article 14.

⁶ See [Eurelectric recommendations](#) concerning TEN–E revision.

CEF – Transport

CEF Transport is designed to support projects removing bottlenecks or bridging missing links in the Core Network and on the Comprehensive Network defined in TEN-T regulation.

It supports innovation in transportation to improve the use of infrastructure, reduce the environmental impact of transport, increase energy efficiency and safety. The [current call for proposal](#) includes projects such as:

- Infrastructure projects on the Core and Comprehensive TEN-T (railways, inland waterways, maritime and inland ports, roads, rail-road terminals and multimodal logistics platforms)
- Smart applications for transport (ERTMS, ITS, SESAR, RIS, etc.)
- Alternative fuels infrastructure (including electricity fast-charging infrastructure on the TEN-T road network, the eligibility is presented [on this map](#)).
- Improvement of transport infrastructure resilience (to climate change and natural disasters).

TEN-T regulation is also under revision⁷ and the recent proposal from the Commission concerning Alternative Fuel Infrastructures Regulation⁸ should enhance the deployment of E-Mobility.

How to apply?

- [Information on the CEF transport 2021 call](#)
- [Information on the CEF energy 2021 call](#)

Example of DSOs projects funded by CEF

Examples of smart grids projects funded by CEF-Energy

Smart Border Initiative (2018 – 2020):

- Between France and Germany: two DSOs (Enedis and Energis)
- It received 1.2 M€ from the CEF
- Study on a MV interconnector between FR and DE, development of a smart grid with a plan for electric vehicles charging infrastructure and flexibility services implementation.

ACON – Smart Grids (2018 – 2024):

- Between Czechia and Slovakia: DSOs (E.ON Distribuce and Západoslovenská Distribučná)
- It received 91.2 M€ from the CEF
- Work to modernize and build MV interconnections, improve existing distribution grid and implement smart grid communication technologies such as GPRS (LTE) and BPL.

Examples of projects of EV recharging points funded by CEF-transport

E-VIA – FLEX-E mobility (2017-2019):

- Project between Spain, France and Italy borders (Enel Spa and Enedis).
- The project received €3,3 million from the CEF.

⁷ See [Eurelectric policy brief](#) on TEN-T

⁸ See [Regulation on the deployment of alternative fuels infrastructure](#), and repealing Directive 2014/94/EU

- The projects aimed at developing 14 ultra-fast charging stations in the three countries to enable cross-border trips with electric vehicles.

How did it benefit to DSOs?

CEF – Energy

Between 2014 and May 2020, only 3 smart grid projects have benefited from CEF-Energy funding. It funded 1 study and 3 works, compared to 65 gas actions and 67 electricity transmission actions. Smart grid projects were granted 134.5 M€, i.e. 3.6 % of the CEF-Energy budget (3.7 B€ until May 2020 on a total budget for 2014–2020 of 4.8 B€).

Repartition of CEF-Energy funding by technology (2014 – May 2020)



Source: European Commission Website

Smart grids have received 10 times less funds from the Connecting Europe Facility – Energy than gas networks or than electricity transmission networks.

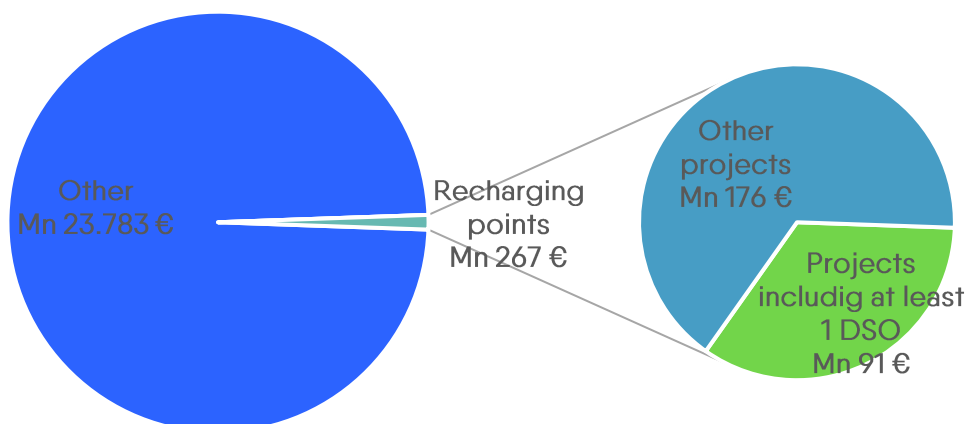
➔ CEF-Energy is underfinancing electricity distribution grids mainly due to restrictive eligibility criteria (as defined by TEN-E Regulation).

CEF – Transport

Between 2014 and May 2020, 30 projects of deployment of EV charging stations benefited from CEF transport fundings. Among these projects, **12 included at least one DSOs** among the beneficiaries. This represented a total amount of **€91 million**.

Deployment of EV recharging points represented only 0,7% of CEF-transport total disbursement and DSOs were included in only 12 projects upon 30.

How did CEF transport benefited to DSOs?

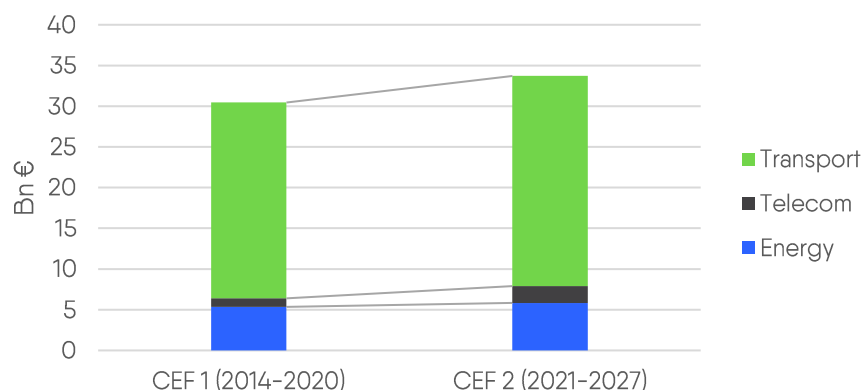


- CEF-Transport is underfinancing the deployment of EV recharging points while this sector is key to enable decarbonization of transports.
- DSOs are key actors in the deployment of e-mobility and thus should be included in projects promoting the deployment of recharging points.

Outlook on the new cycle

The CEF budget has been increased for the 2021-2027 cycle, which will likely increase funding for DSOs. In addition, the Green Deal objectives have been included, with 60% of the funds dedicated to actions contributing to climate objectives.

Increase in the CEF budget



In addition, the two regulations TEN-E and TEN-T are being revised and the amendments should allow for better financing of DSOs.

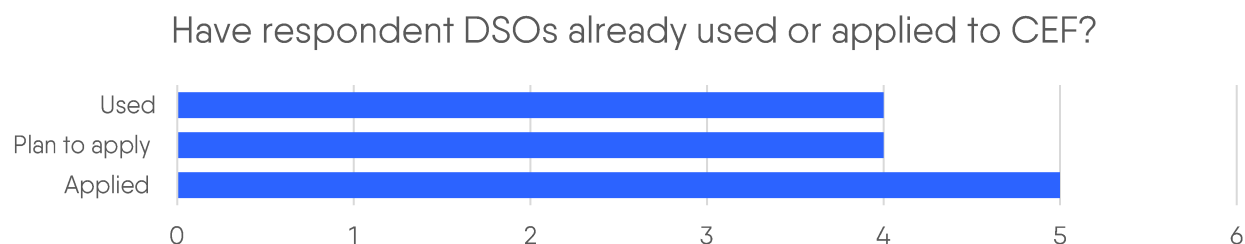
On TEN-E, the revision is currently in the trialogue phase, with major steps for DSOs under the scope of the amendments: the Parliament adopted the possibility for smart grids project for all voltage levels to be eligible to the PCI status. Only one member state could propose a project without the need of a physical common border criterion.

The new CEF will seek to increase synergies between CEF Energy, CEF transport and CEF Digital (by creating specific cross-sectoral work programs. For instance, a part of the CEF Transport funding (67% of the next CEF funding according to the Commission) will be available for synergies.

TEN-T is also under revision. A public consultation was launched and the feedback from the Commission is soon expected. The revision of the Alternative Fuel Infrastructure Regulation under the Fit For 55 package proposed by the Commission upgrades the targets concerning EV charging infrastructure. This should enhance better funding of E-mobility infrastructures.

How did DSOs experience CEF?

Few of the companies that responded have already applied or used CEF, which is explained by the narrow scope of the projects financed by the fund. Indeed, now, CEF-energy is not adapted to small electricity grids projects at distribution level. As an illustration, DSOs that have benefited from the fund have an average of 25,7 million customers versus an average of 10,7 million for all the companies that responded.

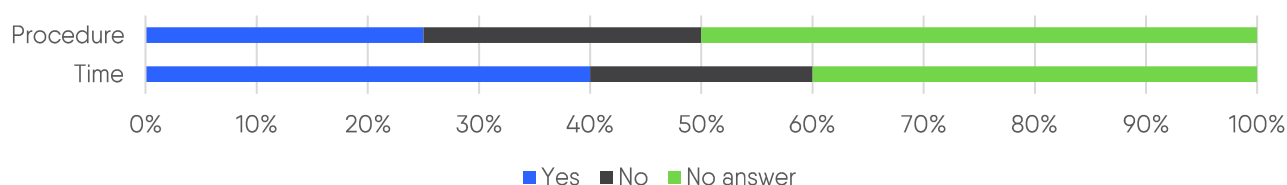


Procedure to access to CEF is long and complex as illustrated in Annex II: a company must first apply to get the Project of Common Interest Status and then application to a proper CEF call to be awarded the grant. The administrative burden and the length of time it takes to obtain funding pose several problems for DSOs:

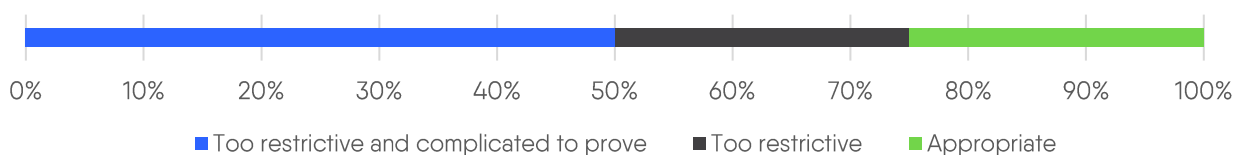
- During the period between the assessment and the European support, projects can only be supported on DSOs without financial support or guarantee.
- The timeline and the complexity of the application combined with the strict eligibility criteria discourage DSOs to apply to the CEF.

TEN-E revision represents an opportunity to streamline the application process for DSOs and to allow for more distribution projects to be funded under CEF Energy.

Are timelines and administrative procedure a barrier to use the CEF?



Relevance of the eligibility criteria of CEF



TEN-E revision should allow a streamlined application process and better suited eligibility criteria for smart grids projects at distribution level.

Cohesion and regional funds

Cohesion and Regional Funds provide grants to close the economic and social gaps between member states and between regions. Total budget for 2021-2027 is € 240 bn. Funding for energy production and networks represented less than 4% of the budget, and distribution grids were granted 860 M€ (0.3% of the total budget 2014-2020). Type of projects financed smart meters, transformers, substations and line upgrades. However, it is a substantial source of EU financing, and should increase in 2021-2027, following the increased climate ambition (32% of climate-related investments).

What are the Cohesion Fund and the European Regional Development Fund?

The [European Regional Development Fund \(ERDF\)](#) aims at strengthening economic and social cohesion in the European Union by correcting imbalances between its regions and at developing a low-carbon and resilient area. The **2021-2027 budget is €191 billion**.

The [Cohesion Fund \(CF\)](#) is financing projects to reduce economic and social disparities and to promote sustainable development in less developed Member States (member states with a gross national income per inhabitant < 90% are eligible). It has a special focus on environment and transports. The **budget for 2021-2027 is € 43 billion**.

Both funds are financing projects in the energy sector, including distribution grid projects⁹.

⁹ See [regulation n° 2018/0197](#) on the European Regional Development Fund and on the Cohesion Fund

- Most of this funding are grants but the projects can also have access to financial products (loans, guarantees, equity). Funding is directly managed by member states. They build partnerships (for every region or on specific themes) with the competent regional and local authorities (public authorities, economic and social partners and civil society) to manage regional programmes.
- Distribution grid projects are usually funded via Competitiveness, Enterprises, Environment, or Infrastructure Programmes.
- Applications to ERDF and CF are assessed by [managing authorities](#) (usually regional councils or ministries). The project application must meet the selection criteria and investment priorities set out in the regional programme. The procedure is established by the relevant managing authorities.

Cohesion and Development Fund represent an important share of the total EU budget (24 %) and an important potential source of funding for DSOs. **860 M€ were granted to 50 distribution grid projects between 2014 and 2019.**

Overview of the Cohesion/Regional fund.

What type of project can be funded by the Cohesion/Regional Funds? Eligibility criteria

The new regulation adopted on the 24th of June 2021 provides general investment priorities for CF and ERDF: both aim at shifting towards a low-carbon economy, with one priority as regards DSOs: “Developing smart energy systems, grids and storage outside the Trans-European Energy Network (TEN-E)”. **The scope of these priorities is reduced compared to the previous regulation.**

There is no minimum amount for projects.

The selection criteria of each thematic or regional Programme are set by the Member States and the Commission in Partnership Agreements. Each project that applies to the Programme funding should fulfil specific ex ante conditionalities, set in the partnership agreement and aligned with the Union strategy. After the funding, the success of distribution grid projects is monitored by the additional number of users connected to smart energy systems.

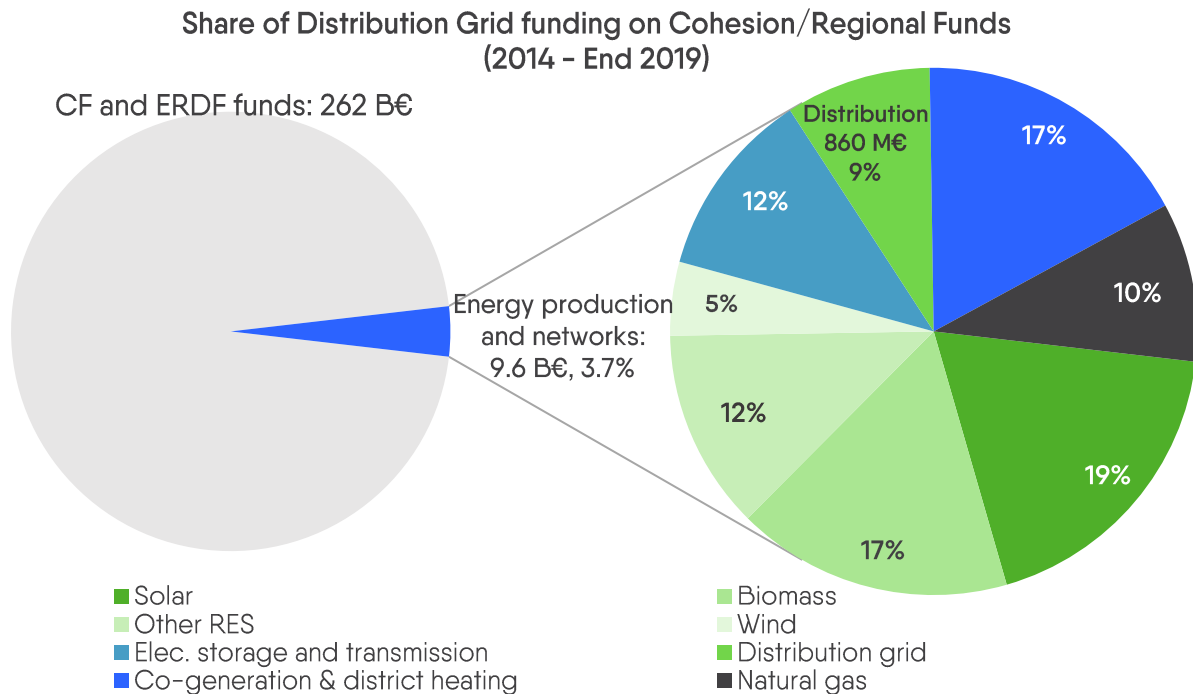
Examples of DSO projects funded by the Cohesion/Regional Funds

Under the Infrastructure and Environment programme in Poland, Energa [received 38 M€](#) for smart distribution systems in the period 2014–2020 to reconstruct the distribution network to Smart Grid standards by installing intelligent metering and network, in various Polish regions such as Kuyavian–Pomeranian and Łódź Voivodeship. The whole national Programme aims at connecting 3.3 M additional users to smart grids.

Under the Enterprises and competitiveness programme in Italy, [e-distribuzione received 138 M€ in 2019](#) for the implementation of smart grids in the less developed Italian regions. It has financed 35 projects (upgrading of MV lines with better conductor, replacing the transformers in substations, installation of transformers) in Sicily, Campania, Basilicata and Calabria.

How did it benefit to distribution grids?

CF and ERDF funded 860 M€ in 50 distribution grid projects between 2014 and 2019.



Source: Eurelectric, retrieved from EU public data (cohesion data portal)

DSO grid investment represent:

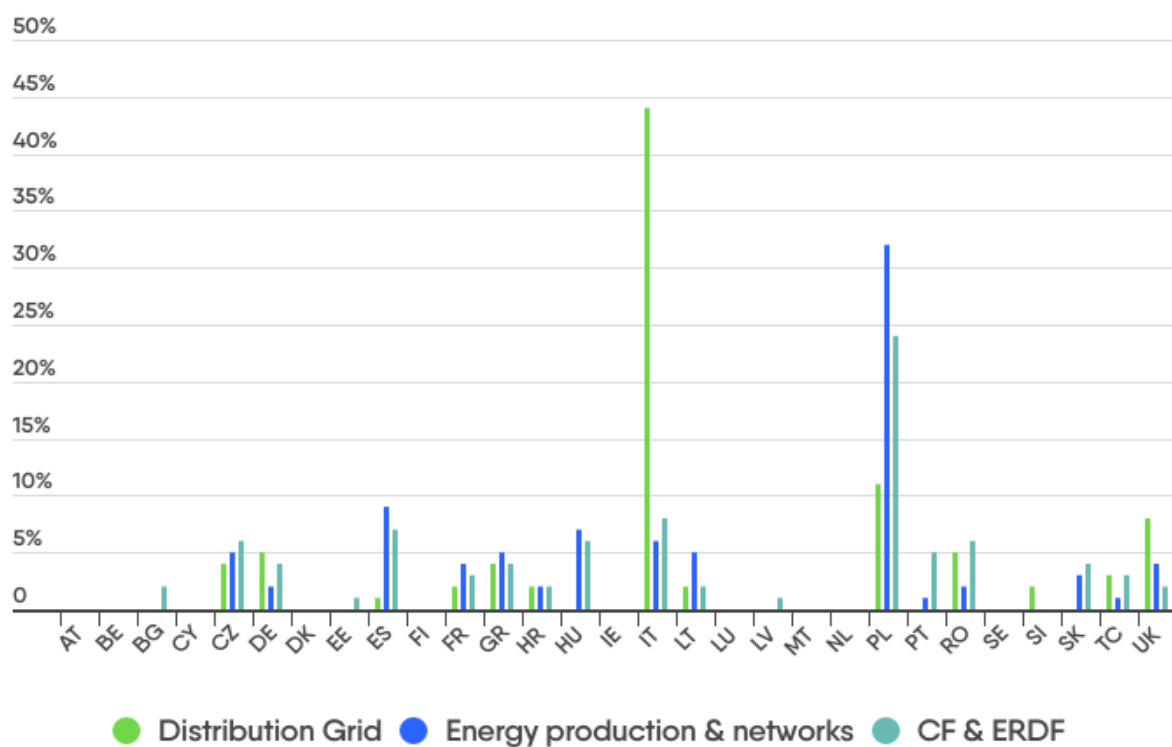
- 0.3% of the total CF & ERDF funding
- 9% of the total “Energy production and networks” funding

Less than Gas (10%) and Electricity Transmission Networks (12%)

- Cohesion/Regional funding of energy production and networks is marginal (3.7% of total available funding).
- Even in mechanisms supposed to be more tailored made for small infrastructure projects, funding in distribution networks represents a small share (0.3% of total available funding).

Geographical breakdown of Cohesion/Regional Funds

Repartition of Cohesion/Regional Funds in the EU (2014–2019)



Source: Eurelectric, retrieved from EU public [data](#) (cohesion data portal)

The geographical breakdown shows that the allocation of funds in energy and distribution tends to be balanced between old and new Member States.

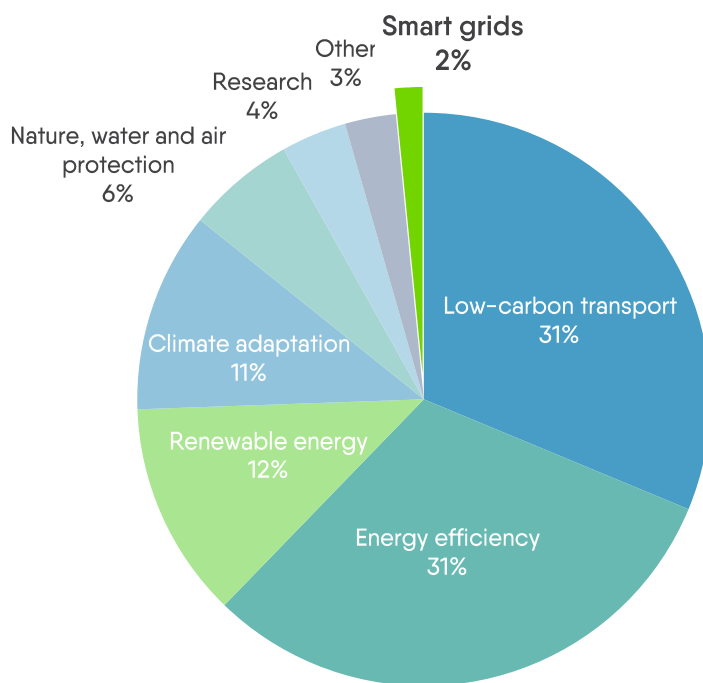
Climate-related investments in Cohesion/Regional Funds

Climate action is one of the pillars of European investment instruments. For the period 2014–2020, the EU set a goal of 20% of the total budget dedicated to climate-related investments. The target hasn't been reached, with 18.8% of the whole budget dedicated to climate.

The Cohesion and Regional Funds achieved better results, with 21% of climate-related investments (55 B€). Among these climate-related investments, electricity distribution grids represent only a small share (2%, 860 M€).

In the new budget, 65% to 85% of ERDF and Cohesion Fund resources will be allocated to the objectives 'Smarter Europe' and 'Greener Europe' respectively.

Repartition of climate investments in Cohesion/Regional Funds



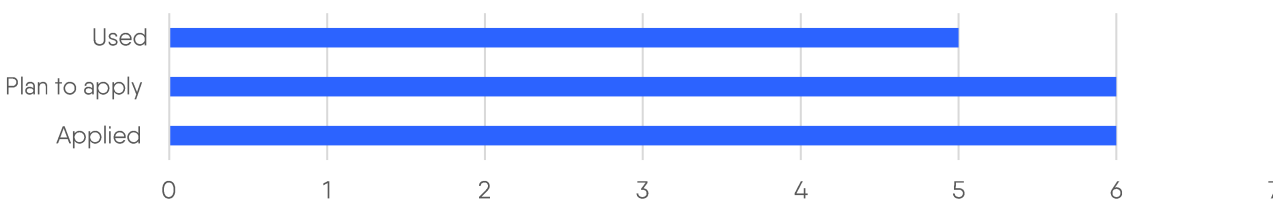
Source: Eurelectric, retrieved from EU public [data](#) (cohesion data portal)

→ The EU has failed to achieve its goal of 20% of climate-related investments in the 2014–2020 budget (only 18.8%) but Cohesion/Regional Funds performed well (21%)

→ In the new budget, the Cohesion/Regional Funds will be crucial to achieve higher ambition in line with the Green Deal

How did DSOs experienced CF & ERDF?

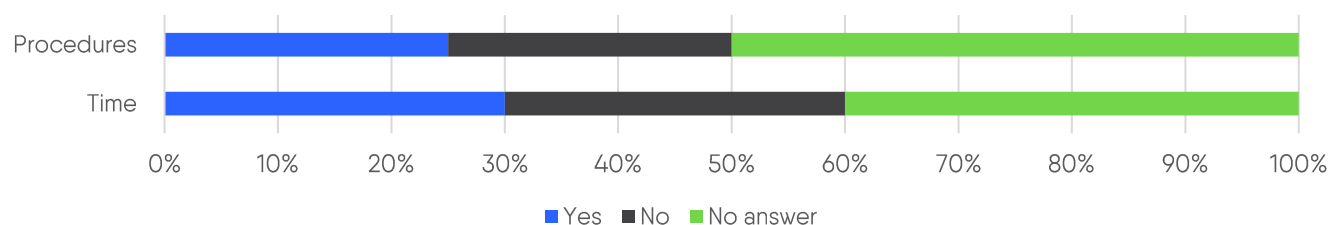
Have respondent DSOs already used or applied to Cohesion and regional funds?



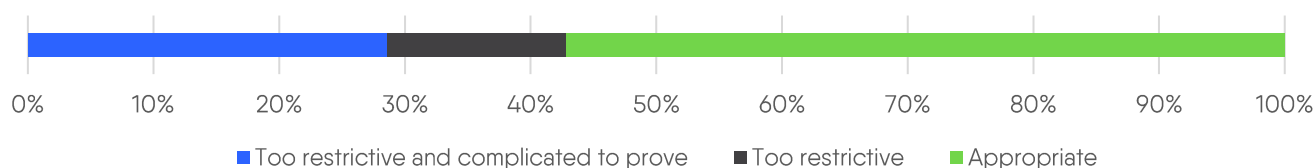
More than half of the respondents have already applied or used Cohesion Fund or European Regional Development fund. However, this fund is highly subject to national policy because EU funding is planned in accordance with national development plan. Thus, if these plans do not

include any specific investment for DSOs, they are not likely to receive any support from these funds.

Are timeline and administrative procedure a barrier to use these funds?



Relevance of the eligibility criteria



iii) Climate actions

The Modernisation Fund

The Modernisation Fund is a funding program which provides grants to the 10 lower-income EU Member States¹⁰ to support them in their transition to climate neutrality through the modernisation of energy systems. A first disbursement decision of €304 million was made in August 2021. It benefitted to 6 projects and 3 of them, representing €77.5 million, were about the modernization of the electricity distribution network including the deployment of smart-meters and the adaptation of the power distribution networks to support the development of electromobility.

What is the Modernisation Fund?

The Modernisation fund is one of the key instruments contributing to the objectives of the Green Deal. It is funded from revenues from 2% of the auctioning of the allowances of the EU ETS system 2021-2030 and additional allowances transferred to the fund by the beneficiary Member State. The total amount of the Modernisation Fund is estimated to **€14 billion for 2021-2030** but will depend on the carbon price.

The Modernisation Fund will support investments in generation and use of renewable energy, energy efficiency, energy storage, modernisation of the energy network and just transition in carbon-dependent regions¹¹:

¹⁰ Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia

¹¹ See the [implementing regulation 2020/1001](#) and the [Directive 2003/87/EC](#) establishing the ETS system and Modernisation Fund

- Member States select and submit the proposed investments to the EIB, the Investment Committee and the Commission. This committee will meet twice a year, as of 2021.
- The EIB assesses the investment and states whether it is a priority investment.
- The Commission takes a disbursement decision twice a year and the EIB transfers the resources to the Member States within 30 days.

Overview of the Modernisation Fund impact

What type of projects can be financed?

Only the 10 beneficiary Member States can submit funding applications. To obtain financing, the beneficiary MS must demonstrate that the investment respects the [ETS Directive](#) requirement and falls into a priority area defined in the same directive. If the EIB assesses that the project is not a priority investment, the project needs to be recommended by the Committee to be eligible.

The Modernisation fund already financed the roll-out of smart meters, the establishment and operation of Energy Communities and Independent Aggregators and the development of the power grids for future electric car charging station.

How to apply?

- [ETS Directive](#) with the criteria defining priority investments.
- [Implementing regulation](#).

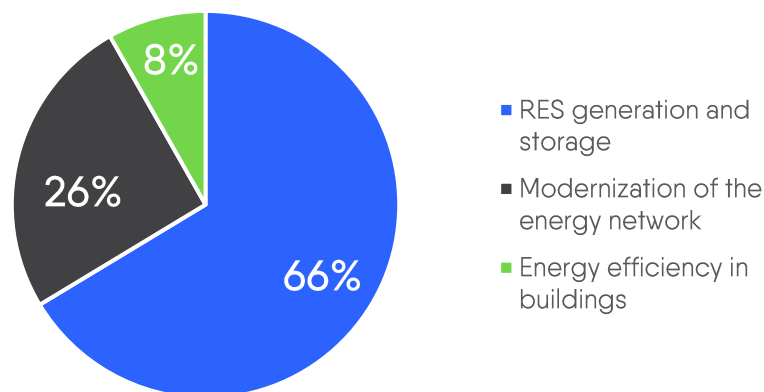
Examples of a DSO project

Under the [first disbursement cycle](#), Poland has been granted €22 million to develop the power grid for future electric cars charging stations. The investment concerns a scheme for the period 2022–2026 and will allow Poland to **modernize 4,000 km of power distribution lines** and 800 substations to support the connection of approximately 12,000 recharging points.

How does it benefit to DSOs activities?

First disbursement cycle

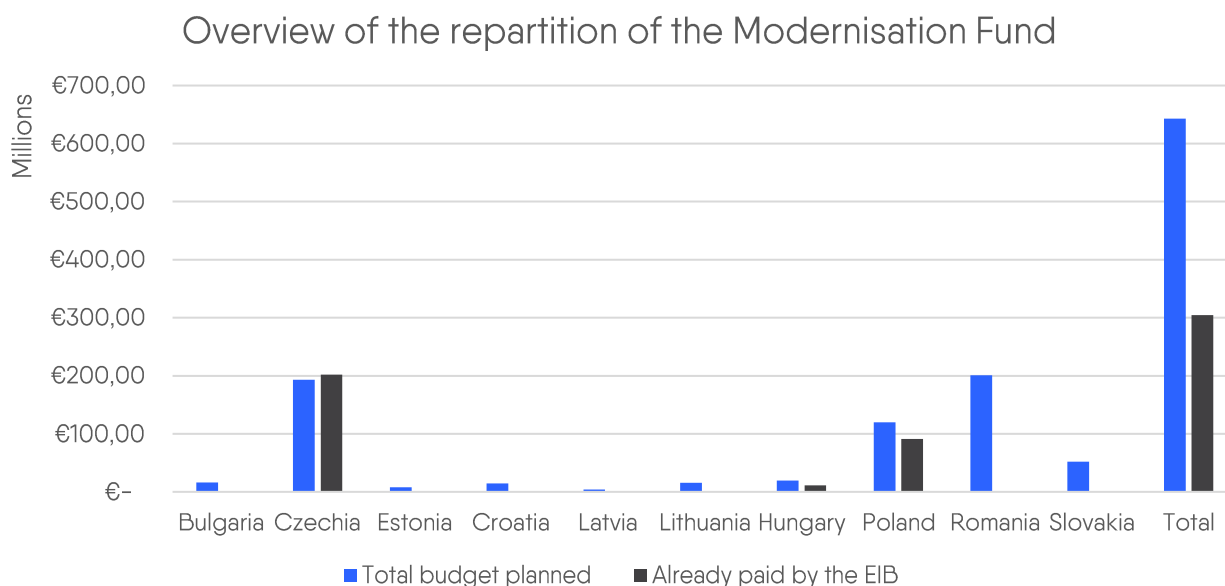
Repartition per sector, data from the EIB



Source: European Commission

- In 2021, €74,5 million have already be granted to electricity distribution grids, this represents a quarter of the first disbursement.
- If the following cycles follow the same path, DSOs projects could be granted up to €3.5 billion.

- ➔ The Modernisation fund appears as a good tool to finance DSOs in the 10 eligible Member States.
- ➔ The trend has yet to be confirmed as only the Hungarian and Polish DSOs have already been able to benefit from it.



SOURCE: [Modernisation Fund Website](#)

LIFE program

The LIFE program was created in 1992. The fund is entirely dedicated to environmental and climate objectives. It provides grants through two sub-programmes, one for Environment and the other one for Climate Actions. The total budget for the 2014-2020 cycle was €3,5 bn. It supported 10 DSOs related projects representing €25 million which represents 0,7% of the total budget. The present LIFE programme covers the period 2021 to 2027 and has a financial envelope of €5.45 billion.

What is the LIFE program?

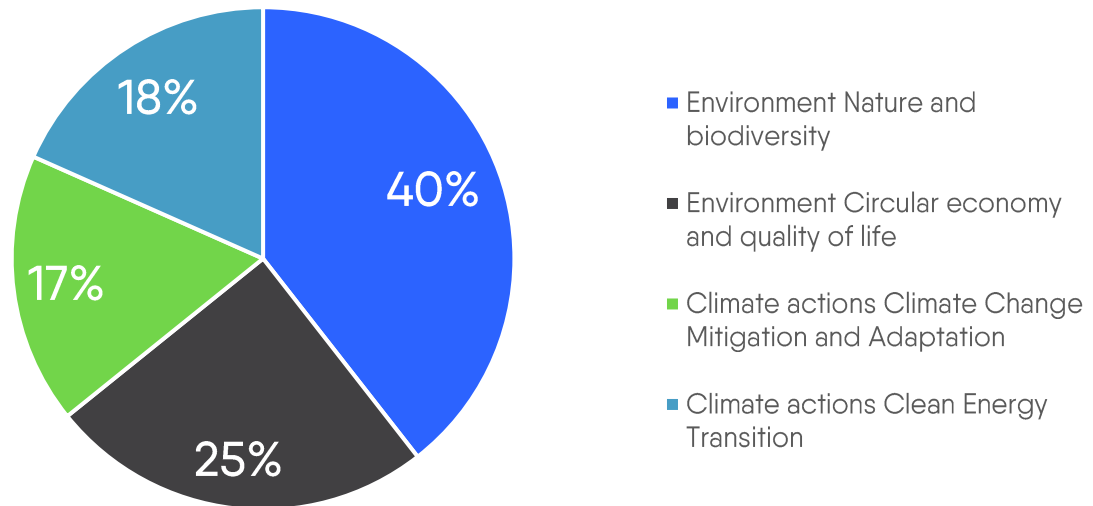
The LIFE program is the only European Facility entirely dedicated to climate actions¹². The 2021-2027 cycle has a budget of €5,45 billion and will be distributed through grants to support the following objectives:

¹² See the [regulation establishing LIFE program](#).

- Contribute to develop a clean, energy-efficient, low-carbon and climate-resilient economy, and enhance energy transition.
- Protect the environment and particularly nature and biodiversity.

The programme is divided into **two fields and four subprogrammes**. The budget dedicated to the field Environment is €3,5 bn while the field Climate Action will receive €1,9 bn. Funds are allocated through an annual call for proposals.

LIFE Budget, 2021-2027 cycle



Source: European Commission

Overview of the LIFE programme impact

What type of projects can be financed?

Any public or private organisation legally registered in the European Union or countries associated to the LIFE Programme can submit a proposal. The budget of the funded projects is between €500 000 and €5 million. The actions supported by the fund are specified into the Commission's multiannual work program. [2021-2024 program](#) will support the following actions:

- **Implementation actions** (training activities, information campaigns).
- **Monitoring and evaluation actions** to assess the actual impact of the implementation actions.
- **Communication and dissemination actions.**
- **Actions for project management** and quality control.

The Commission publishes call for proposals for the period covered by the multiannual work programme, as well as the eligibility criteria.

How to apply?

- [The funding and tender portal](#)
- [The first call for proposal for the 2021-2027](#)

Examples of DSO projects

LIFE LSO – A Swedish innovative platform transforming buildings into sustainable energy resources, enabling an EU smart grid.

The goal of the LIFE LSO concept is to design a platform to link users, suppliers, and distributors. The system aims at fully integrating renewable sources, solutions for energy metering, storage, electric vehicles chargers and buildings to optimize synergies and reduce the cost for the users. The total budget for the project was €2 million and the LIFE grant has covered half of the costs.

LIFE GYPCONNECT – Restoration of connections between the Alpine and Pyrenean populations of bearded vulture

The LIFE GYPCONNECT project's goal is to develop new vulture populations thus creating a connection between the existing bird population. One of the steps to reach the objective was to improve the security of the sites by further isolating the sections of electric network to protect birds. The French DSO Enedis was thus associated to the project which was granted €4,2 bn

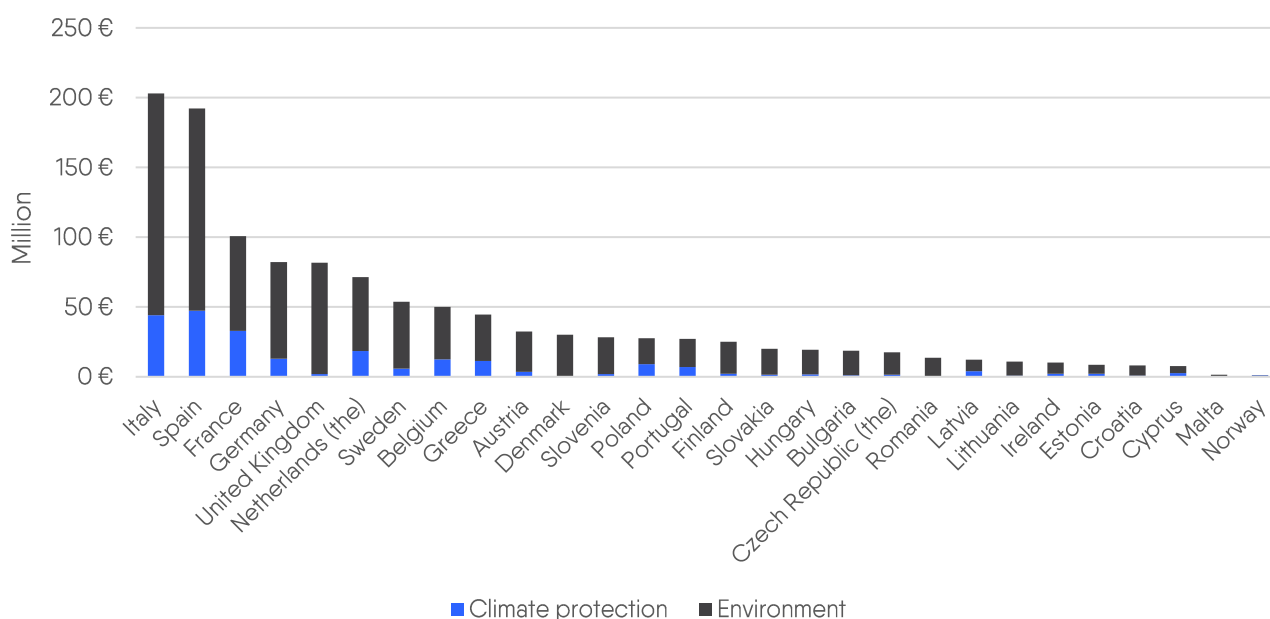
How does it benefit to DSOs activities?

During the 2014–2020 cycle, LIFE supported 10 DSOs related projects representing €25 million which (0,7% of the total budget). Most of the projects concerned the preservation of biodiversity (such as birds population) through the adaptation of the power grids.

However, projects concerning the clean energy transition can also be eligible to the 2021–2027 cycle. This represents a new opportunity for DSOs to fund their projects fostering renewable energy integration for instance.

- During the 2014–2020 cycle, LIFE supported 10 DSOs related projects representing €25 million which (0,7% of the total budget).
- New opportunities for DSOs projects exist in the new cycle with the subprogramme clean energy transition (€ 1bn).

Repartition of fund, 2014–2020



SOURCE: EUROPEAN COMMISSION

iv) Funds to leverage private investments

The European Investments Bank

The European Investment Bank provides loans to finance large-scale projects, typically more than 25 M€.

The EIB is a good instrument for lending to DSOs: 3.3% of EIB loans (14.8 B€) went to distribution grids since 2012, more than for transmission grids or gas networks.

Type of projects financed: refurbish and extend MV and LV networks, EV charging infrastructure, automation, and remote-control systems.

The transformation of the EIB into a “Climate Bank”, with the end of fossil funding and 50% of climate-related loans, will give more possibilities to get loans for distribution infrastructure and for investments to develop smart distribution networks.

Overview of the - EIB energy lending

What type of project was eligible to EIB financing?

In November 2019, the EIB released its [energy lending criteria](#), and electricity distribution grids were already an important area for their funding. The bank will support “All electricity transmission and distribution infrastructure, with the exception of direct connection of generating capacity based on coal and lignite”.

- EIB has prioritised its financial support to distribution investment programmes, including rollouts of smart meters and, more comprehensively, smart grid demonstration projects.
- EIB loans typically covers up to 50% of a project’s total cost. These loans typically start at 25 M€ and in certain cases the EIB will consider lower amounts.

The project should also meet the following criteria:

- Compliance with the [Bank's Guide to Procurement](#) and [Environmental and Social Standards](#)
- Consistency with EU policies (sustainable growth, job creation, cohesion)

Examples of DSO projects funded by the EIB

The EIB has mostly funded traditional distribution grid assets and smart meters, but it is willing to invest more in new technologies such as smart grids and integration of renewables or electric vehicles in its 2019 energy lending policy.

The energy utility CEZ (Czech Republic) has received 330 M€ in 2019 to improve [its distribution network](#) (reinforce MV and LV networks, install automation and tele-control systems, 4160 km of new lines and refurbishment of 2475 km of lines).

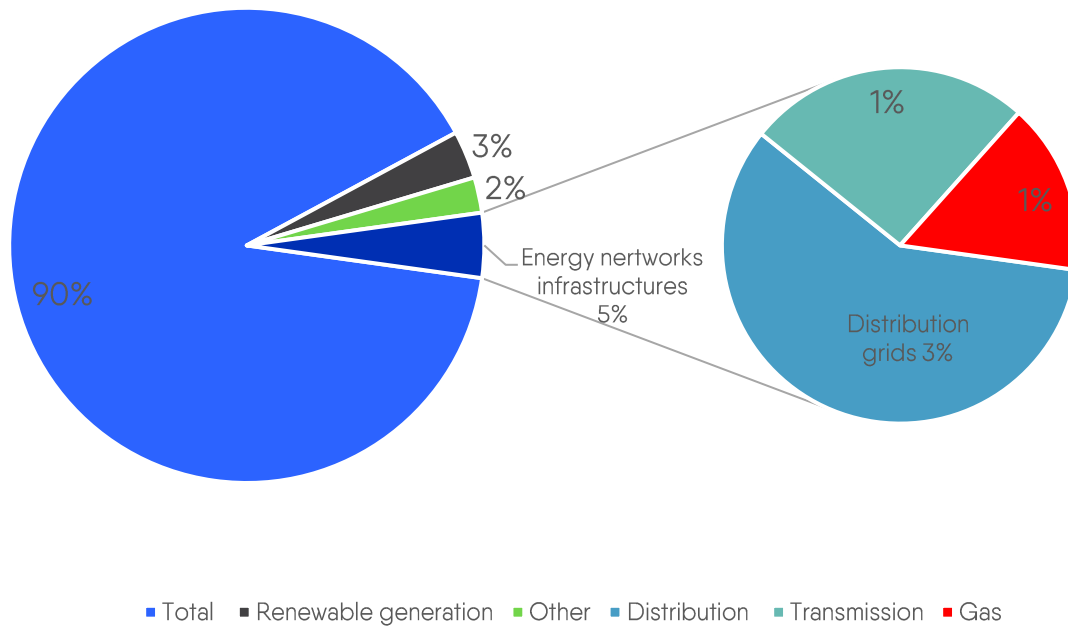
Eesti Energia (Estonia) has obtained loans of 175 M€ in 2019 to extend and refurbish distribution networks, invest in public lighting and charging stations for electric vehicles.

How did it benefit distribution grids?

- Since 2019 and the new energy lending policy, **the EIB has signed 8 B€ of contracts to invest in electricity and gas infrastructures in the EU, which is a relatively small part of the EIB loans** (5% of the total budget 163 B€ compared to 8% on the previous cycle).
- **4,7 B€ went to electricity distribution grids (59%)**, more than electricity transmission networks and gas networks.
- In comparison, for the 2012–2019 period, with the previous lending criteria, 8% of the total budget 448 B€ had been allocated to electricity and gas infrastructures among which 14.8 B€ went to electricity distribution grids (39%).
- Thus, **distribution grids represent 2,9% of the total loans for 2019–2021 compared to 3,3% in the previous cycle.**

Thus, the increase in climate ambitions of the EIB did not benefit to distribution grids as the share of investment in grid infrastructures was reduced in favour of renewable generation and other climate related actions (energy efficiency in heating & cooling for instance). Thus, even if gas infrastructures are less financed, the share of loans dedicated to distribution infrastructures did not increase.

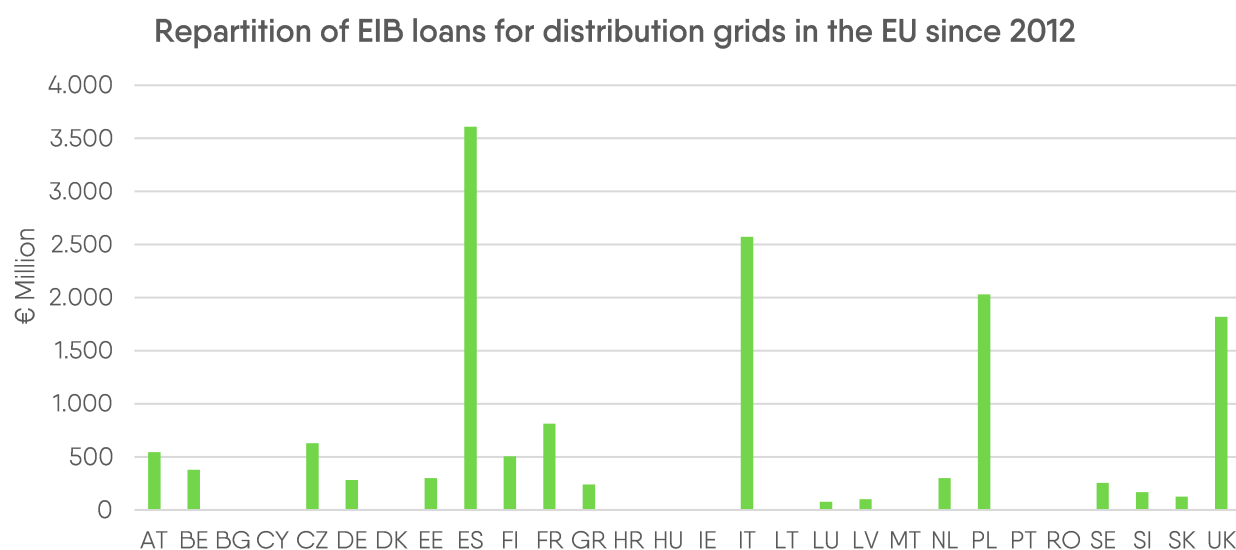
Repartition of the EIB loans for 2019–2021



Source: Eurelectric, with data from the EIB

- The EIB is a good instrument for lending to DSOs
- The increase of its climate action did not give more opportunity to DSOs because of the increasing share of loans dedicated to renewable generation.

Geographical breakdown of EIB loans for distribution grids



Source: EIB, 24/02/2020.

The EIB loans for distribution grids were mostly granted in four countries (Spain, Italy, Poland and the United Kingdom). Conversely, some EU countries haven't use EIB loans for distribution grids since 2012.

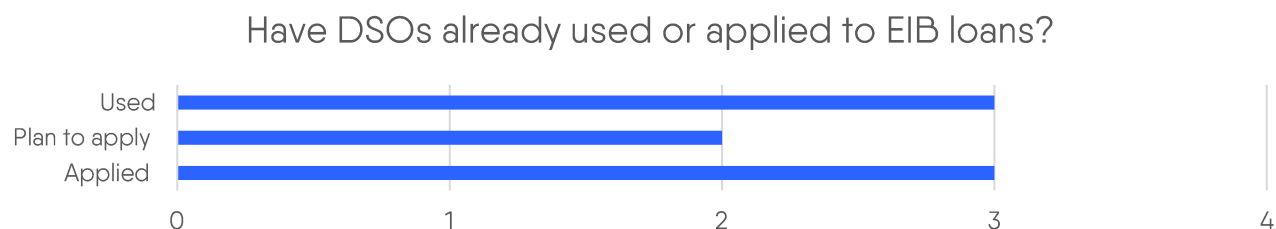
Further reference:

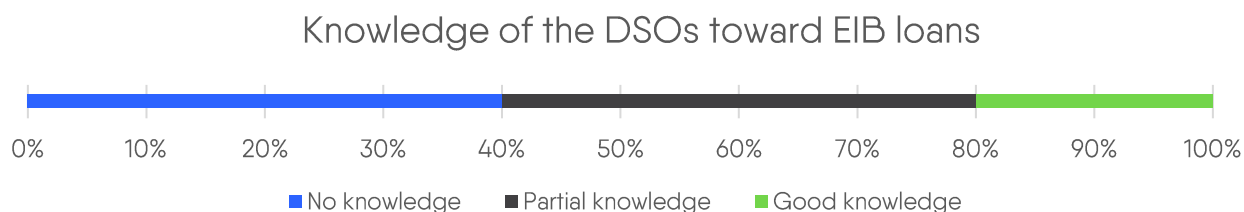
- [Applying for a loan](#), EIB

How did DSOs experienced EIB loans?

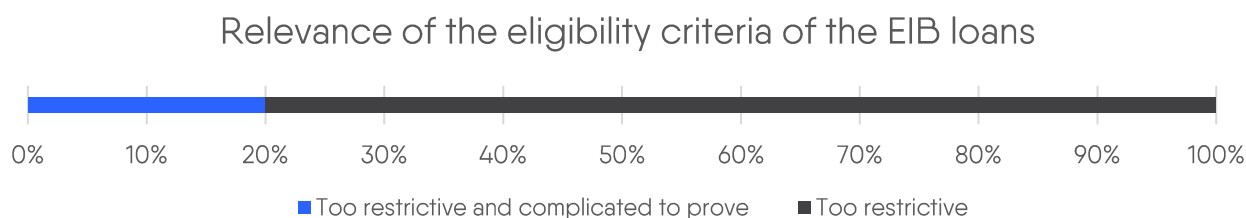
Among the respondents, only 3 of them have already applied and used EIB loans. This represents a quarter of the DSOs which have answered our survey. This low rate can be explained by multiple factors:

- First, the lack of knowledge about this fund: 80% of the respondents have "No knowledge" or a "Partial knowledge" of the opportunities offered by the bank. Some DSOs point at the lack of transparency of the rates of the loans.
- Secondly, the fact that EIB loans are not particularly interesting even if the rates are lower than in private sector because the negotiations with the Bank are time consuming and because the EIB is not willing to take risks.





The eligibility criteria for EIB loans are also pointed at by our survey. Most of the respondents think that they are too restrictive. This goes hand in hand with the problems met by DSOs to finalize the negotiations with the Bank.



**Negotiations process with the Bank should be streamlined.
The Bank should increase its transparency concerning interest rates as well as procedures and eligibility criteria.**

InvestEU

InvestEU brings together the European Funds for Strategic Investments and 13 other EU financial instruments. It is, like EFSI, a guarantee system to mobilize private investment in 4 key areas including Sustainable infrastructure. It is usually financing large-scale projects, including for distribution grids. Energy was an important sector for EFSI (21% of its guarantees). Electricity networks were granted 1.5 B€ of guarantees, 3% of the total guarantees, but it is lower than gas networks funding (2.1 B€).
Type of projects financed: modernization and extension of networks, roll-out of smart meters and renewables integration in grids.

What is Invest EU?

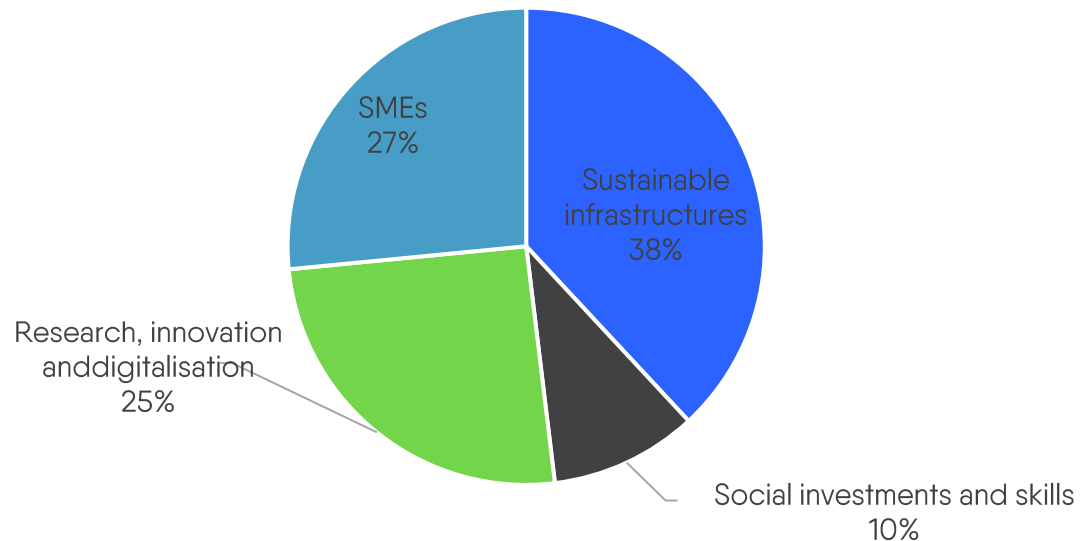
The InvestEU Fund is expected to attract at least €372 billion of investment through an EU budget guarantee of €26.2 billion in support of investment by implementing partners such as the European Investment Bank (EIB) Group and other financial institutions. **The system supports investments in 4 distinct policy windows¹³:**

- Sustainable infrastructures, including “the development, smartening and modernisation of sustainable energy infrastructure, in particular storage technologies, electricity interconnections between Member States and smart grids, both at the transmission and distribution level” (€9,9 bn).
- Research, innovation, and digitalisation (€6,6 billion).

¹³ See [Regulation \(EU\) 2021/523](#) establishing the InvestEU programme.

- Small and Medium-size Enterprises (€6,9 billion).
- Social investment and skills (€2,8 billion).

InvestEU budget (2021-2027)



SOURCE: EUROPEAN COMMISSION WEBSITE

How does it work in practice?

Project promoters directly apply [to implementing partners](#) which should provide a financing solution based on financial tools supported by the Invest EU guarantee.

For instance, in 2017, the Polish DSO Energa wanted to modernize and expand its distribution grid. It applied for an EIB financing and reached an agreement with them: Energa issued a 250 M€ bond bought by the EIB and guaranteed by the EFSI (now Invest EU): here, the EFSI allows the EIB to buy a higher-risk bond.

SMEs should apply to their local commercial or public banks whose financial products are covered by the EU guarantee. The [local intermediary](#) will inform the company if a given programme is covered by the InvestEU Fund.

Overview of InvestEU opportunities

What type of projects can be funded by InvestEU?

The sustainable infrastructures priority area is the relevant one for DSOs funding. It includes “the development, smartening and modernisation of sustainable energy infrastructure, in particular storage technologies, electricity interconnections between Member States and smart grids, both at the transmission and distribution level”

The project should also [meet the following criteria](#):

- It should be economically and technically viable
- It should be consistent with EU policies (sustainable growth, job creation, cohesion)

- It should provide additionality: it means that the InvestEU operations should address market failures or sub-optimal investment situations and that these operations could not have been carried out with the help of the EU funding and the implementing partner.

How to apply and further reference.

- [How to get financing?](#)

Examples of DSO projects funded by InvestEU

All the projects supported by Invest EU can be found in the [InvestEU portal](#). For the moment, InvestEU has not financed any distribution projects. However, here are some examples of projects that were funded by its predecessor EFSI:

The [Distribution Network Investment Programme](#) led by Ellevio (Sweden) obtained **250 M€** of guarantee to **increase the capacity and renew the network**, continue to weather-proof the rural network and prepare it to receive more distributed renewable energy.

[Tauron Distribution](#) (Poland) has benefited from **190 M€** (and 174 M€ in a 2nd phase) of guarantees to **modernize and extend the distribution network** in southern Poland (approx. 4500 km of new lines).

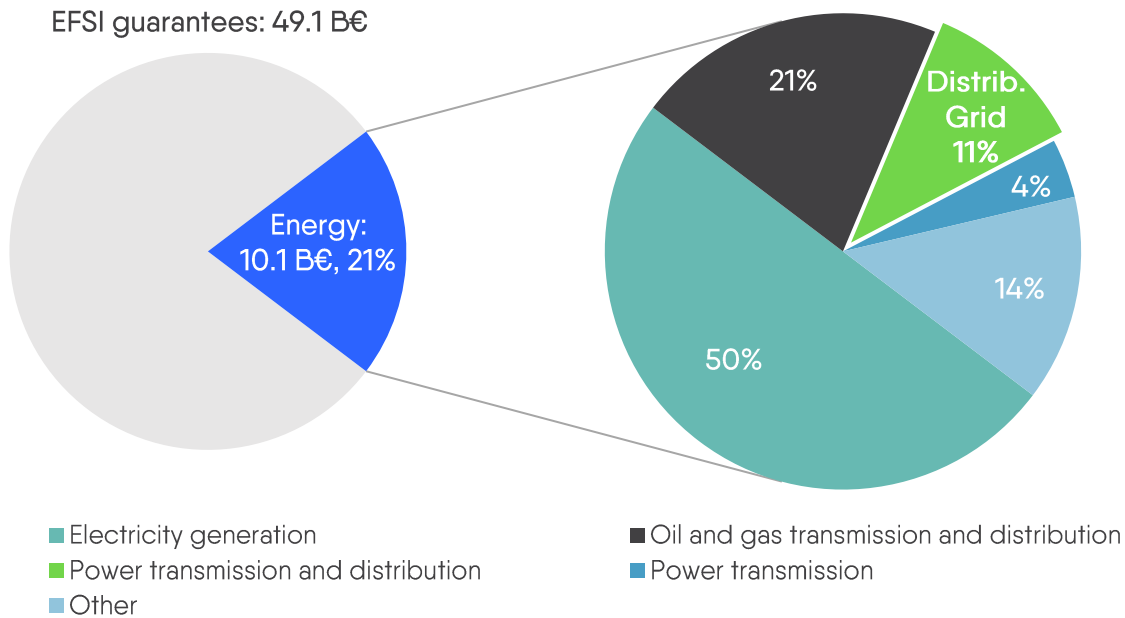
Calvin Capital obtained **53 M€** of guarantee from EFSI for the **rollout of electricity** and gas smart meters in the United Kingdom with the [Calvin SmartMeter Programme](#).

How did it benefit distribution grids?

As InvestEU was created too recently, it is not possible to have any hindsight on the benefits that DSOs will derive from it. A summary of the funds allocated to DSOs by its predecessor EFSI is however possible:

- Energy production and networks is a significant part of EFSI guarantees: **10.1 B€ of guarantees were allocated to this objective, 21% of EFSI total guarantees (49.1 B€)**
- Between 2015 and 2019, EFSI provided 1.1 B€ of guarantees to electricity distribution networks (**11% of all energy production and network guarantees**)
- Electricity networks represent **only 3% of EFSI investments**, lower than oil and gas infrastructure (2.1 B€). This demonstrates a disproportionate financing of gas and the need for a rebalancing in favor of electricity networks.

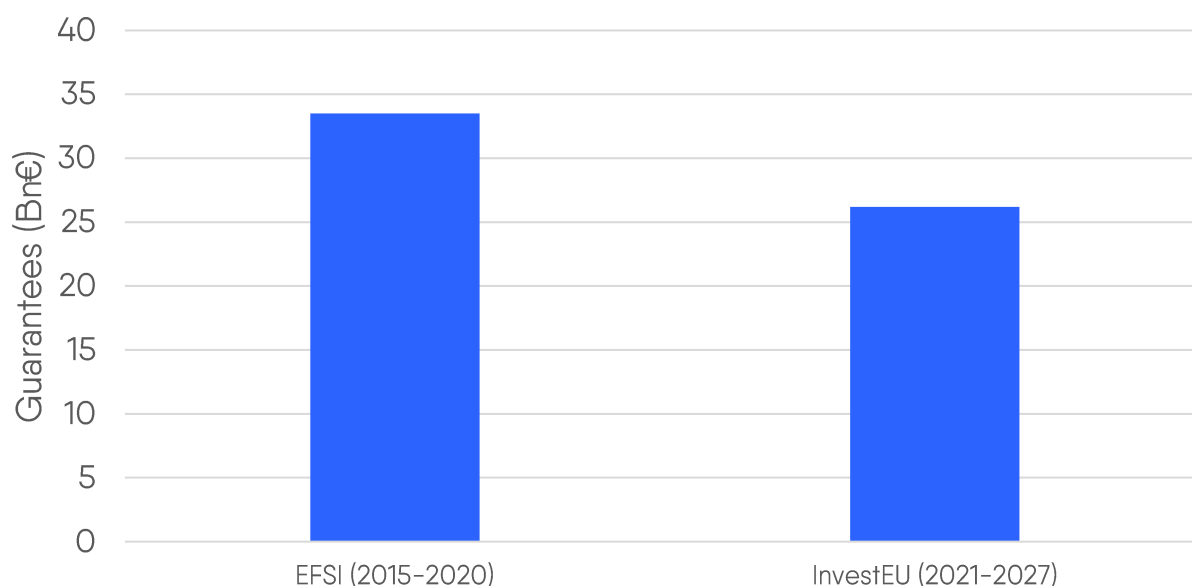
Share of Electricity Networks funding on EFSI (2015 - 2019)



Source: Eurelectric, retrieved from European Commission and EIB data.

→ EFSI has so far provided 44% more guarantees to gas networks than electricity transmission and distribution networks

The climate ambitions of InvestEU are higher than for EFSI: the Sustainable infrastructure area is required to have 60% of climate-related financing, higher than the 2014-2020 target of 40% for the Infrastructure and Innovation window (IIW) and the effective 36%, achieved by the end of 2018. The common target for InvestEU is 30% of climate-related financing. However, the budget of the fund has been reduced. Thus, we do not expect that this fund gives better funding opportunity to DSOs between 2021 and 2027.



Source: European Commission

→ Investments supported by InvestEU in energy networks should be rebalanced in favor of electricity networks to be in line with the European Green Deal

v) Recovery actions

Resilience and Recovery fund (RRF)

The RRF provides grants and loans to European member states to support public investments and reforms, particularly in climate and digital fields. The goal is to help to repair the social and economic damages of the coronavirus pandemic. The RRF will provide grants amounting to at most €312.5 billion and loans amounting to at most €360 billion. The final repartition of this facility is complicated to estimate because most of the national plans have just been approved by the Commission, however, we can estimate that the amount of available grants from which DSOs could benefit in part will be between €5,1 bn and €6,8 bn.

What is the RRF?

The [Recovery and Resilience Facility \(RRF\)](#) is the largest component of Next Generation EU (NGEU), the European Union's landmark instrument for recovery from the coronavirus pandemic. The RRF will provide grants amounting to at most €338 billion at current prices and loans amounting to at most €390 billion at current prices.

For each member country, at least **37% of the expenditure should be attributed to investments and reforms that support climate objectives**, and 20% to the digital transition.

Member States have submitted their national plans and the Commission should assess the plans within two months of their official submission and make a proposal for the Council. The Council has one month to approve the national plans before the Commission pays 13% of the total support. Further disbursements can be requested by the member country based on the satisfactory fulfilment of the milestones and targets.

Overview of the RRF impact.

To which kind of projects will it benefit?

The Recovery and Resilience Facility is the main tool of [NextGenerationEU](#), a temporary recovery instrument that aims at repairing the economic and social damage caused by the coronavirus pandemic. The Facility is aligned with the Commission's priorities that promotes the green and digital transitions¹⁴.

Flagship areas have been drawn up by the Commission to encourage Member states to invest in given areas such as clean technologies and renewables, energy efficiency of buildings, sustainable transport and charging stations etc.

In order to benefit from the fund, Member States have to proceed as it follows:

- Submit their recovery and resilience plans to the European Commission. Each plan sets out the reforms and investments to be implemented by end of 2026. The plans must be in line with the targets for digital and climate fields but also address challenges identified in the European Semester, particularly the country-specific recommendations of 2019 and 2020 adopted by the Council.
- Within two months after the receipt, the Commission assesses the plan. Then the Council approves national plan. The Council approval allows the Commission to proceed to the first disbursement (13% of the total support) within two months.
- Up to twice a year, Member states could ask for further disbursements if they have reached their targets.

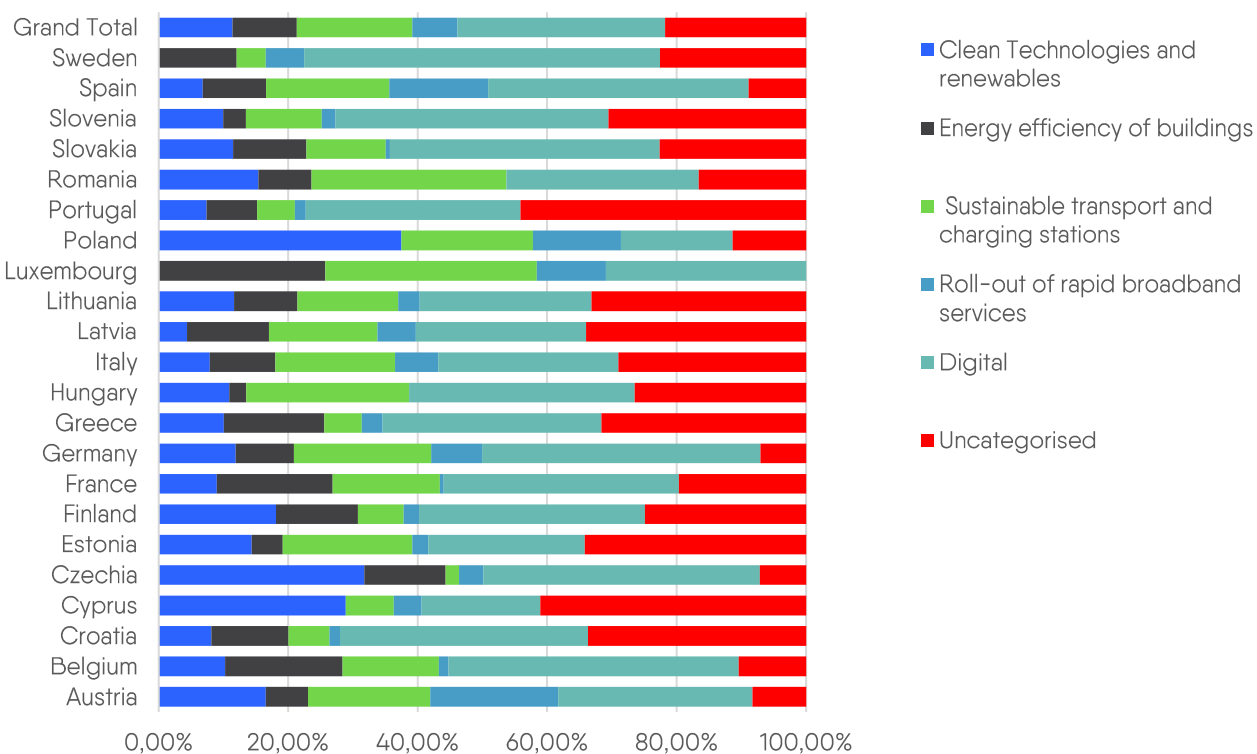
Overview of the current situation

For the moment, the Facility is in its early stages. Most of the countries have submitted their plans. As of 11th October 2021, the number of submitted plans stands at 25 and the Commission have endorsed 20 of them. The first disbursement has just begun, it is therefore impossible to know the list of projects that will ultimately benefit from the Facility.

The analysis of the recovery and resilience plan of each country is tough because the nomenclatures and categories chosen are different. However, based on the analysis released by the Commission, we can have a first overview of how this fund will be distributed.

¹⁴ See the proposal for a [REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL](#) establishing a Recovery and Resilience Facility.

Planned repartition of the RRF



SOURCE: BRUEGEL DATASET ABOUT THE RRF

The total share of the fund dedicated to clean technologies and renewables represents only 17% of the total resilience and recovery plans at European level compared to 25% for digital transformation.

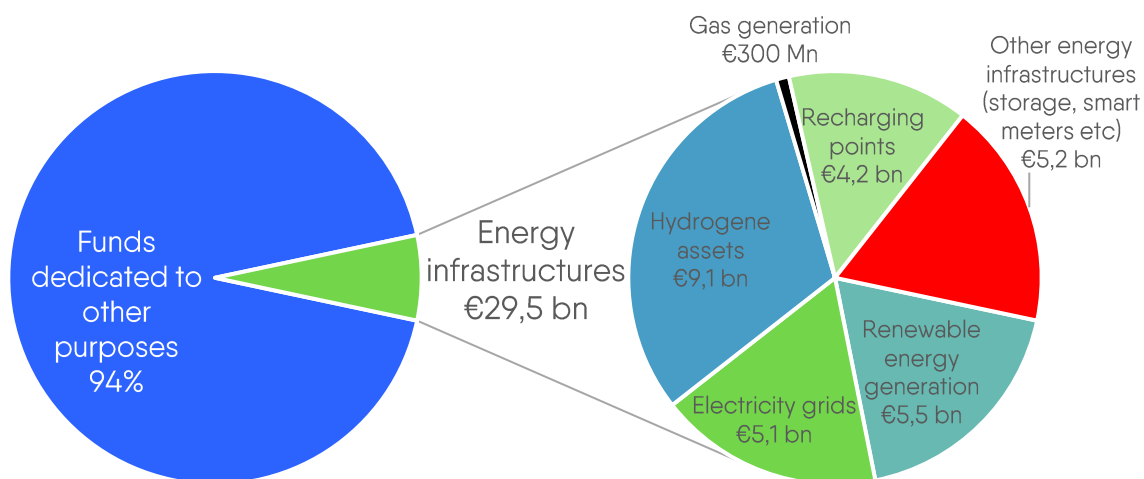
→ National Recovery Plans dedicated less than 20% of the European RRF to Clean Technologies and Renewables.

How could it benefit distribution grids?

The Commission's analysis of national plans suggests that of the 20 countries covered, 13 contain funds that are likely to be allocated to distributors.

For instance, [Italy plans to disburse €4.1bn](#) for strengthening and increasing resiliency of the power grids.

How could the RRF benefit to DSOs?



SOURCE EURELECTRIC, USING THE COUNCIL ANALYSES OF THE NATIONAL RECOVERY AND RESILIENCE PLANS.

→ The RRF may represent a funding opportunity for many DSOs, since the categories from which distributors could benefit represent between 5,1 bn and €6,8 bn according to our first analyses.

→ However, the situation is difficult to assess at this stage and very dependent on the member state under consideration.

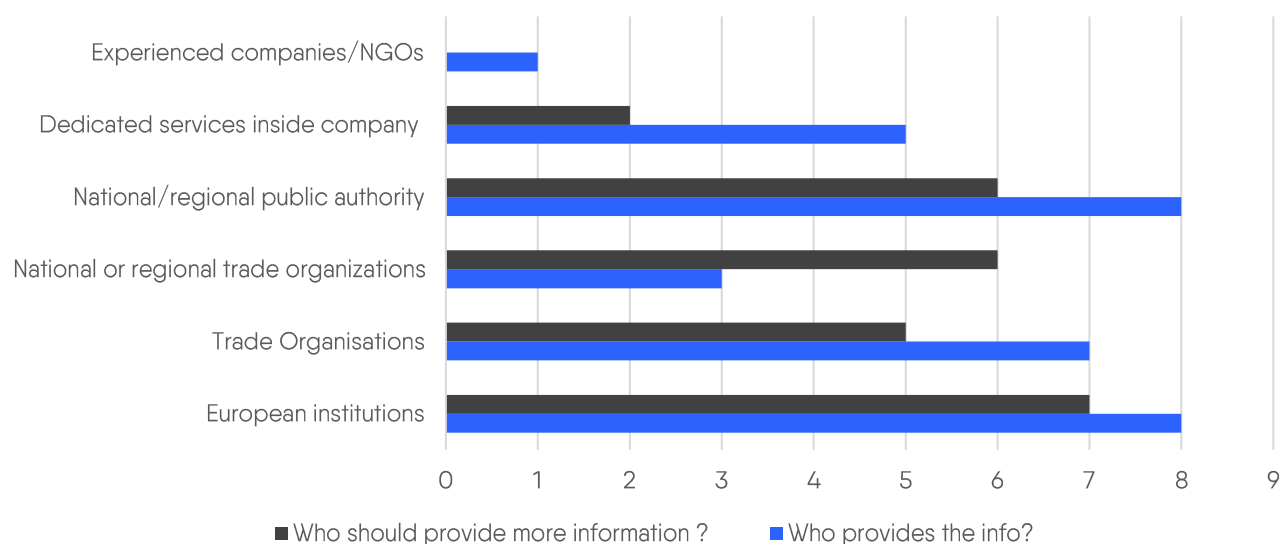
2. Are EU funds adapted to the needs of DSOs?

i) Access to the knowledge and sharing of information

Among our respondents, 3 out of 11 considered that the lack of knowledge about European fund can be a barrier to use the funds. Indeed, small companies do not have the internal resources to look for the complete informations about the funds.

Thus, the sharing of information should be improved and European Institutions as well as national and regional public authority or trade organisation. The [Funding & Tenders portal](#) represent a first step toward a unified and easily accessible information bank. In particular, the fact of gathering several examples of projects having benefited from European funds on the same platform is welcomed with enthusiasm.

However, the information remains dispersed and DSOs have to dig into different website, analyse the programmes and the terminology used in different programmes to map all their opportunities. A list of successful projects of DSOs in different programmes available of one point would be beneficial to DSOs funding, particularly for small DSOs.



ii) Timelines and administrative procedures

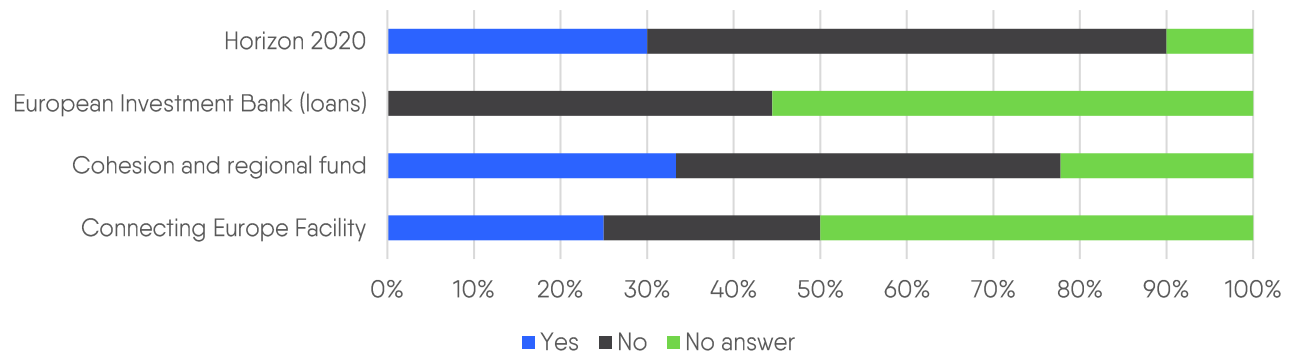
As underlined in the previous section about each specific funds, timelines and administrative burden represent a barrier to the use of the funds. It can either discourage DSOs to apply or make funds less attractive.

In particular, the project evaluation period was singled out. All the process before the signature is very long (get corporate approval to launch/participate in a project, submit in time proposal to formal call, get feedback from the relevant EU institution and commit to signing a grand agreement). **The duration of the process always reaches 1 year or more.** This can discourage the application and prevent DSOs from testing their projects or submit several applications.

Thus, we think that **the application process should be rather broken down into two phases:** one phase for project promoters to submit the ideas and a second one for full project applications for selected project ideas. This could allow DSOs to test their ideas without dedicating too many resources to a project which will not necessarily succeed at the end.

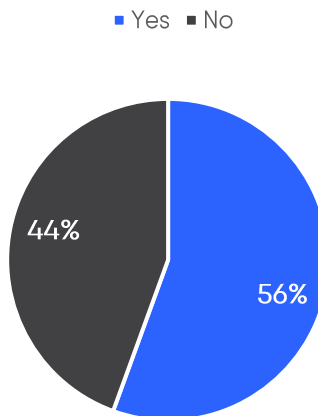
The fund for which this procedure is the most denounced is the CEF, whose application procedure is detailed in Appendix 1. Access to the CEF Energy fund is hampered by the complexity of the process and by the lack of funding dedicated to electricity smart grid projects. The current revision of the TEN-E regulation represents a good opportunity to streamline the application process for DSOs and to allow for more distribution projects to be funded under CEF Energy.

Is administrative burden a barrier for DSOs from benefitting from the EU funds?



iii) Barriers met at national levels – good and bad practices

Do you identify national particularities that make the use of European funds impossible or unattractive for your company?



National measures are the main barriers preventing DSOs from fully benefiting from the funds available for distribution networks. Indeed, 56% of the respondents identify national barriers that prevent them from applying to certain funds or make those funds less attractive. The purpose of this section is to shed light on good and bad practices at the country level that help or hinder the proper use of funds by distributors.

Bad practices at national level

Tariff regulations

“Contributions from third parties (such as EU funding) are deducted from the RAB (regulatory asset base), thus preventing the accumulation of funding for reconstruction of the respective infrastructure.”

JSC "SADALES TĪKLS", LATVIA

Given the need for significant investment and upgrading of electricity infrastructure, it is expected that some DSO will have to make use of significant public funding, such as the Recovery and Resilience Facility, to avoid a socially unacceptable increase in the costs paid by users. However, since DSOs are mainly remunerated based on the capital invested without receiving any remuneration for investments made with public funding, this may lead to an under-utilization of the available public funding and to a significant delay in the investment and upgrading of electricity infrastructure aiming at accelerating the electrification of society.

To meet the climate targets set by the European Union, DSOs will have to increase their annual investments by at least 50% in the next decade. European funds represent a significant funding opportunity to meet these investments. **National tariff policies should therefore not run counter to DSOs' investments.**

Incentive models for DSOs to obtain funding vary greatly across the EU. In some Member States, there are incentives with **additional WACC** for EU projects. In other member states, projects can **receive regulatory depreciation on assets financed by grants.**

These are two good examples of how DSOs can be incentivised to take on PCI projects and receive funding from the CEF.

However, this is not the case in all Member States. In most of them there are no incentives at all, as the grid operators are simply not allowed to earn returns on the Regulated Asset Base (RAB) that is financially supported by EU or other external grants. This combined with the fact that such additional physical assets will automatically drive up OPEX, which is often object to efficiency requirements in national tariff regulation while there is no recognition in the asset base of the assets financed by the grant – these regulatory frameworks lead such funding options adabsurdum for a grid operator.

Thus, enable cost-effective remuneration and incentive models at national level to enable grid transformation and Energy Transition, not only focusing on short term cost savings, but national tariffs should also not deduct European fund from the RAB. This practice makes the use of European funds inefficient and prevents long-term investments by DSOs.

Discussions regarding the compatibility of investments with the regulatory framework are underway in the various countries. In general terms, electricity distributors require that investments not covered by financing have to be additional to the investment plans agreed with the local competent authorities.

Cohesion policy

The National development plan (the main mid-term planning document) does not foresee the modernisation of DSO infrastructure as one of the development priorities. As EU funding is planned in accordance with the National development plan, there is no dedicated investment for DSOs in CF and ERDF framework.

JSC "SADALES TĪKLS", LATVIA

Investment in distribution networks is essential for the integration of renewables, the deployment of e-mobility and more generally for a successful energy transition. National development plans should take into account the importance of DSOs in the energy transition.

National support to DSOs

National funding programs

“The government has just issued the draft Climate law, that detects main investment directions of Modernisation fund and the use of Emission quota trading funding. These funds can also contribute to the allocation of funding for DSOs.”

JSC "SADALES TĪKLS", LATVIA

National support for DSOs can result in the creation of national funds that can benefit distribution networks. While such initiatives must also be accompanied by appropriate tariff policies, they can provide financial support for one-off investments.

National information points

There are a lot of opportunities to find the necessary information concerning the EU funding, such as: government website containing information about different sources of EU funding, local government websites, Information Points of the European Funds. Potential applicants and beneficiaries may also attend different kind of seminars, webinars and trainings, organized both by national authorities/institutions as well as by EU institutions, providing us both with general knowledge about the specific fund but also with some details if we want to apply for the money from this specific fund.

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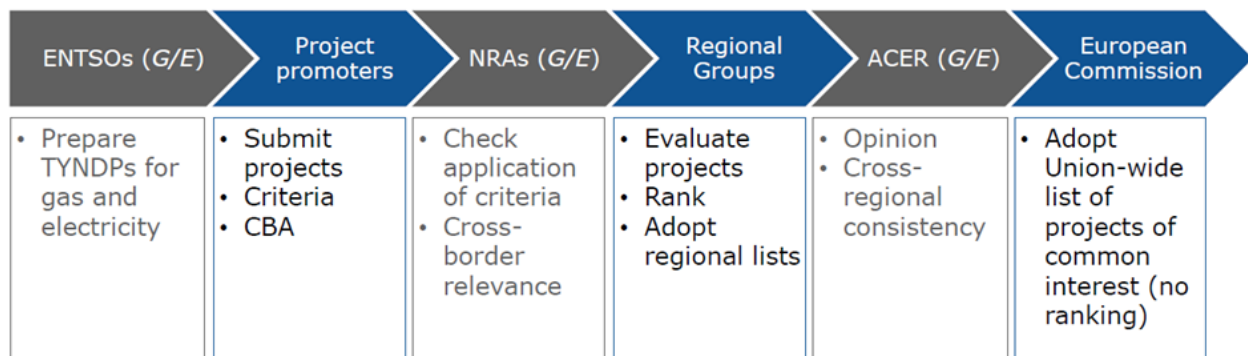
National authorities and institutions have a role to play in sharing information about available EU funds and facilitating their use. Indeed, the application steps and eligibility criteria may vary from one country to another. The information disseminated at the national level is therefore valuable.

ANNEX 1: Trans-European Network – Energy (TEN-E)

i) What is TEN-E and the PCIs?

The [TEN-E Regulation](#) aims to better interconnect electricity and gas infrastructure across Europe. The goal is to help, identify and implement **Projects of Common Interest** (PCIs) that are needed to improve these networks, focusing on 9 priority corridors (4 electricity, 4 gas and 1 oil) and 3 thematic areas (smart grids, electricity highways and cross-border CO₂ network).

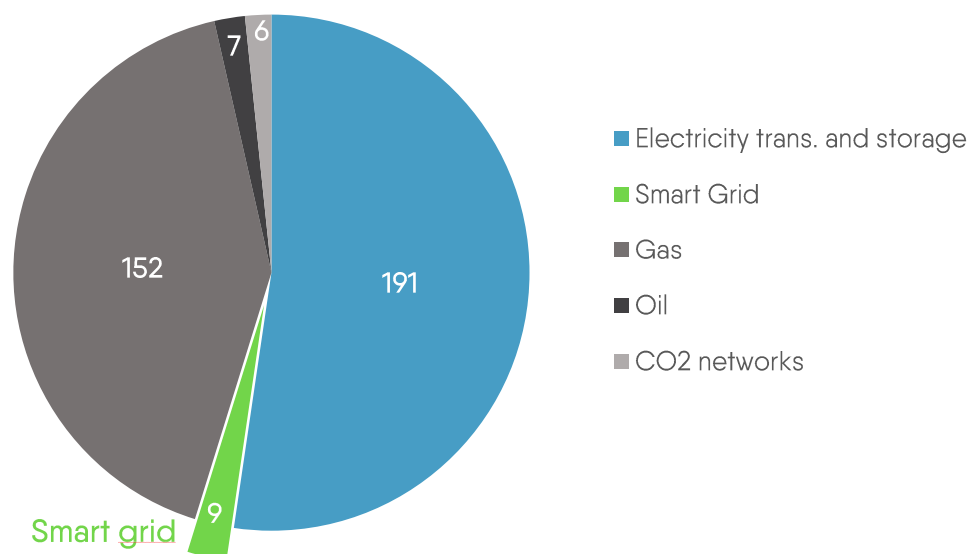
Process of PCI selection



ii) Statistics on smart grid PCI

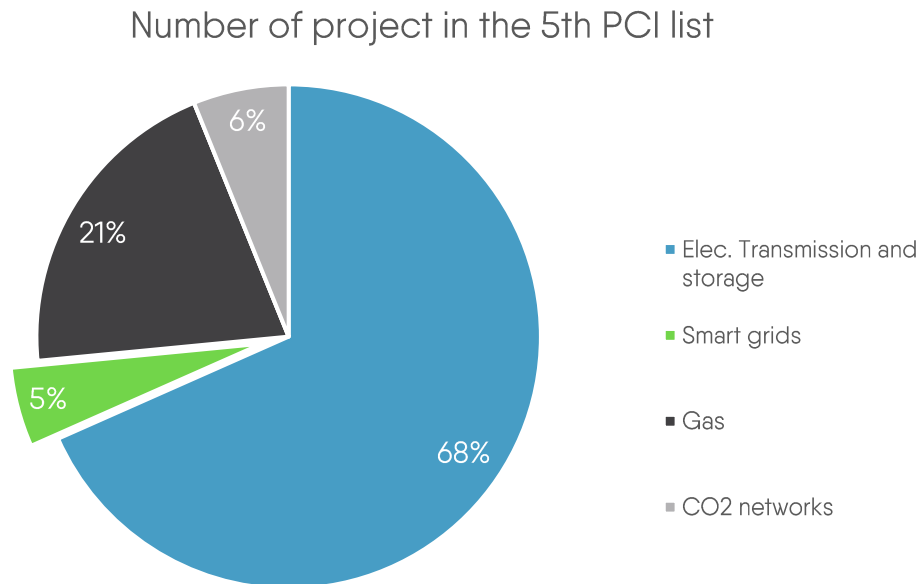
Since the 1st list in 2013, 9 smart grids projects have been part of the PCI list on 365 projects. It is usually the same projects that are on the lists (for example, SINCRO.GRID has been in list 2, 3 and 4).

Number of PCI by sector since the 1st list



Source: European Commission

On the 5th PCI list (Nov. 2021), 5 projects are smart grid projects out of 98 projects, whereas 67 are for transmission networks and storage:



Source: European Commission (1st December 2021, adopted by the EC and under approval of the Council and the Parliament)

iii) What are the benefits of being a PCI?

- Highest national priority status, accelerated permitting and administrative support
- Required to be a PCI to benefit from the **Connecting Europe Facility (CEF)**
- Easier access to **Cohesion Fund (CF)** and **European Regional Development Fund (ERDF)** grants, to the de-risking tools and guarantees of InvestEU and to the EIB lends

iv) How to label a DSO project as PCI?

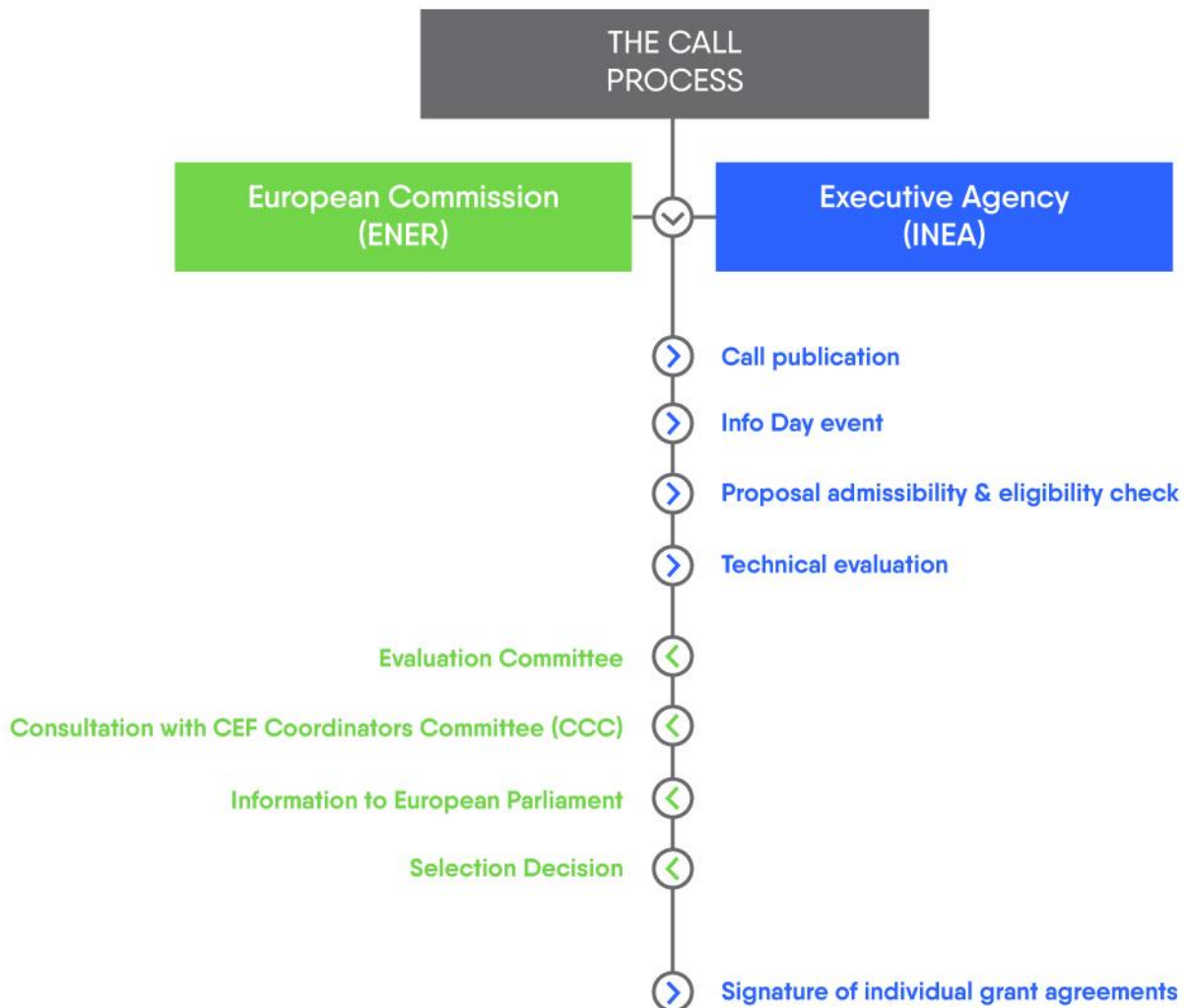
For a smart grid¹⁵ project:

- HV and MV with Voltage > 10 kV
- Involve TSO and DSO from 2 member states
- At least 50 000 users (consumers & producers) in an area > 300 GWh/year, with > 20% of vRES.

¹⁵ 'Smart grid' means an electricity network that can integrate in a cost efficient manner the behaviour and actions of all users connected to it, including generators, consumers and those that both generate and consume, in order to ensure an economically efficient and sustainable power system with low losses and high levels of quality, security of supply and safety. ([Regulation No 347/2013](#))

- Should contribute significantly to all of the following specific criteria: integration and involvement of network users; efficiency and interoperability of electricity transmission and distribution; network security, system control and quality of supply; optimised planning of future cost-efficient network investments; market functioning and customer services; involvement of users in the management of their energy usage.

ANNEX 2: CEF-Energy selection process – the Commission and the Innovation and Networks Executive Agency



Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability



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