DSO Entity's final version
(23/7/25)

Consultation on Commission Guidance on grid connections

Introduction

The Commission is seeking input by stakeholders on its planned guidance on how to handle grid connections, in particular in situations with capacity constraints, and would like to give stakeholder the opportunity to present their views.
In addition to this questionnaire the Commission will hold a stakeholder workshop on 27 June, for which your organisation should have received an invitation.

The increase in decentralised renewable electricity installations and the electrification of end uses in transport, heating and cooling, and industry put strains on the grid. Already now grids are heavily congested in some areas leading to delays in grid connection and grid access for certain users. Long queues for grid connections are a major challenge.

The long-term solution to the challenge of the constraints on grid availability is the accelerated build out of the grids. Efficiency of the existing grids also needs to be improved. In the short-term, a transparent and adequate treatment of connection requests by grid operators, including the use of flexible connection agreements, is key for the energy transition.

In this context, in the ***Industrial Action Plan for the European automotive sector*** adopted on 5 March 2025 and in the ***European Steel and Metals Action Plan*** adopted on 19 March 2025 the Commission announced that it would issue guidance and recommendations on how to shorten waiting times for grid connections, how to better manage connection requests and how to handle connections in situation with grid capacity constraints.

The Commission is therefore launching this consultation of interested stakeholders to give them the possibility to provide their views and input on this topic. We kindly invite you to fill in the attached questionnaire by **25 July 2025**. Where relevant, please include references to sources of information.

Fields marked with * are mandatory.

Questions

General information about your organisation

* Organisation

EU DSO Entity

* Type of organisation

- ☒ DSO
- ☐ TSO
- ☐ Ministry
- ☐ Industry association
- ☐ Other

Efficient handling of grid connection requests

1. Treatment of speculative applications

The hoarding of grid connection capacity can be a significant issue when developers secure grid connection approvals but delay or never proceed with the project construction, thereby blocking access for other users who may be ready to build the projects in a foreseeable future.

* Do you consider that there is a problem in the EU or certain Member States with speculative and immature requests?

- ☒ Yes
- ☐ To a certain extent
- ☐ No
- ☐ No reply

In your view, what would be the best approach to avoid that **speculative and immature application** create a bottleneck for processing connection requests?

DSO Entity:

Scarcity of available grid capacity is becoming an increasing challenge in several Member States. DSOs are at the forefront of this development being confronted with a significant growth of connection requests for – partly extremely large – consumption (for data centers), production and batteries. In several Member States counter-productive practices become apparent in the form of speculative and immature applications that take time and resources from DSOs and create additional bottlenecks for processing connection requests. Partly, DSOs spend a lot of time screening locations for projects (for free in some countries) that do not mature into tangible projects or stakeholders are blocking capacity by either booking too much capacity to

have it available for their own use later or to keep competitors from entering the market at a certain location.

This phenomenon can also be described as "**virtual grid saturation phenomenon**". When a request for a connection of a generation plant is submitted, the DSO must assess the impact of a new power plant on the grid to ensure the efficiency of the electricity service. One of the main verifications carried out concerns the degree of saturation of grid components (transformers and lines). By carrying out this verification, it is necessary to consider not only the capacity of activated generation plants (which contribute to the actual level of saturation), but also the previously submitted connection requests that have reserved grid capacity. As a result, this reserved capacity is no longer "virtually" available for new RES power plants in the same areas, leading to more complex and less feasible connection solutions. Moreover, it introduces uncertainty to the grid planning processes made by DSO, especially if volumes of blocked reserve capacity become relevant. In these cases, DSO should make challenging assumptions on the production or consumption profiles of these units when assessing new hosting capacity.

An effective approach to avoid speculative and immature applications would be to implement **stricter eligibility criteria (fees) and/or milestone-based requirements** for obtaining and retaining grid connection capacity.

A list of non-exhaustive measures below:

- **Require stricter financial guarantees at the application stage (i.e. advancement-based installment payments, fees)**, refundable only if the project reaches specific development stages, to discourage speculative applications. Additional clauses could be imposed to incentivize timely implementation as a form of pressure.

- **Introduce binding project development milestones** (e.g. permits, construction start) that applicants must meet within clearly defined timeframes after receiving a connection offer. These timeframes may vary depending on the size and installed capacity of the projects and should be clearly specified.

- **Prioritize ready-to-build projects that demonstrate a high degree of maturity** based on criteria such as the completion of permitting procedures, signed equipment supply or EPC contracts *(Engineering, Procurement, and Construction),* and the suitability of the project site and implement a scoring mechanism for connection applications. For example, in terms of proximity to substations, the presence of environmental constraints, or whether the project is located within a designated renewables acceleration area.

Can you provide a best practice from an EU Member State?

DSO Entity:

Please find below a list of non-exhaustive examples from Member States. However, given the complexity of the topic and the different situations within Members States a successful practice in one Member States does not necessarily mean that it can / should be replicated in another Member State (no one-size fits all approach):

- In **Poland**, the new proposal for a revised Energy Law (UC84; link here: https://legislacja.rcl.gov.pl/projekt/12396003/katalog/13118093#13118093) published on 24 March 2025 and expected to enter into force by early 2026 at the latest introduces a **non-refundable fee for the processing of grid connection conditions application** in the amount of 1 PLN per kW of the connection capacity specified in the application, but no more than PLN 100,000 (approx. EUR 23,922) will be introduced. The fee shall be submitted separately for each grid connection point indicated in the application. Furthermore, **stricter financial security** is to be established by the applicant in the

form of a deposit, insurance or bank guarantee. The amount of the financial security will depend on the size of the installation (30 PLN/kW for installations below or equal to 100 MW, 60 PLN/kW for installations higher than 100 MW). The security shall be established within 30 days from receiving of grid connection conditions, under risk of losing the validity of these conditions.

- In **Romania**, as of 2024, a legislative amendment to the grid connection regulations was made that no longer allows speculative reservation of grid capacity. The new legislation requires the **payment of a guarantee amounting to 5% of the project's value before reserving capacity**. This amount is transferred to the DSO for grid reinforcement works, in case the project is not completed. This guaranteed payment, and the potential forfeiture of the amount in favor of the DSO if the project is not completed, helps filter out speculative behavior in the market.

- An example for a **milestone-based advancement,** both for the requestor and grid operator is the process developed by E.ON's subsidiary Syna (in the Frankfurt area of **Germany**). To fairly accommodate load growth due to the boom of data centers construction in the vicinity of Frankfurt, Syna designed a process based on conditional gradual release of additional capacity to the data center in pre-communicated blocks also taking into consideration evolving business needs while respecting the pace of network expansion at the TSO level.

- In the **Slovak Republic,** the scope for speculative applications is limited - mainly due to the **short period for payment of the connection fee (15 days) from the signing of the connection contract.** If the fee is not paid, the contract becomes invalid, and the capacity reservation automatically expires.

- Another effective instrument in the Slovak Republic is a provision that enables a **part of the fee paid to not be refunded if the technical conditions for connection are not met within the time limit**. This measure creates an economic disincentive to block distribution capacity without any real intention to connect. At the same time, once connected, Slovak law obliges the g**rid user to contract and pay at least 50 % of the reserved capacity monthly,** which is another instrument that significantly reduces the incentive to make speculative requests 'over and above' the actual need.

- In **France**, for some type of connections, Enedis requires the applicant to **provide a copy of "autorisation d'urbanisme" (building permit) as a condition to consider the connection application**. Enedis is also progressively implementing a system of **"pre-request" (for consumption) to address connection applications that are over-anticipated to meet deadlines**. Enedis informs customers who send their request too early that the connection agreement proposal will be provided later. This should incentivise customers to present projects that are mature, ready to be connected and on which customers will commit quickly (signature of the quotation, realisation of the construction work by the customer, etc.). This implies that the DSO commits to reasonable delay and clarity along the process, so that all stakeholders work in parallel.

- A general example for a good practice is a competitive bidding process organized by the NRA, which allows participation only from RES projects classified as "mature." In such cases, additional financial guarantees are required to ensure the project's implementation.

Together, these mechanisms ensure that distribution system capacity is allocated in a highly efficient manner and that priority is given to realistic and responsibly prepared projects.

2. Treatment of delayed and stalled projects

In certain situations, projects that already have the right to connect may not proceed as initially envisaged. Such projects which are not maturing may thus lock capacity.

* Do you consider that there is a problem in the EU or certain Member States with non-maturing projects for which capacity is locked?

- ☒ Yes
- ☐ To a certain extent
- ☐ No
- ☐ No reply

In your view, what would be the best approach to avoid **that projects which are not maturing lock capacity**?

DSO Entity:

A good approach to prevent non-maturing projects from locking grid capacity is to **implement a milestone-based monitoring system** with clear deadlines and create a subsequent prioritization mechanism *(first-ready – first-served approach).*

- Grid connection rights should be conditional upon the achievement of key development steps (e.g., permitting status, construction start). If a project fails to meet these milestones within a specified timeframe, its priority status in the above-mentioned prioritization mechanism could be downgraded, leading even to the loss of connection rights and the enforcement of additional clauses. This ensures that only progressing projects retain access to limited grid capacity, while inactive ones do not block others that are ready to advance.

- In this context clear authorization timelines and processes by authorities should be set and coordination developed between permitting authorities and DSOs/TSOs.

Besides these concrete proposals, several of the above-mentioned measures (under question 1) such as general advancement-based installment payments will be helpful in determining which connection requests are mature enough to move to the next level of (more concrete) planning and which are not.

Can you provide a best practice from an EU Member State?

DSO Entity:

Please find below a list of non-exhaustive examples from Member States. However, given the complexity of the topic and the different situations within Members States a successful practice in one Member States does not necessarily mean that it can / should be replicated in another Member State (no one-size fits all approach):

- In **Hungary**: New network connection process is under development (for generation and storage). The new procedure will align with the targets set in the National Energy and Climate Plan. A gap analysis will be conducted to identify the network areas and technologies where additional

connections are justified. To ensure timely progress, clearly defined milestones—such as payment of connection fees or obtaining power plant permits—will be enforced. If these conditions are not met, the use-it-or-lose-it principle will apply.

- In **Romania**, projects with a signed contract have a validity period of max. 3 years, after which the reserved capacity is released if the project is not completed.

- **In Spain**, to identify the most mature projects, Circular 1/2024, has made it mandatory for DSOs and the TSO to publish demand capacity maps displaying available capacity at transmission and distribution nodes. This initiative aims to provide greater transparency for potential end-users, enabling them to assess better which areas offer the most available capacity. As a result, access and connection requests can be submitted in a more informed and orderly manner, with ex-ante knowledge of the grid's status.

- **In Poland**: The proposal for a revised Energy Law (UC84 – refer to previous question) sets project milestones that will need to be communicated to the DSO by the applicant. The applicant will need to reach the following milestones (except for offshore wind farms): obtention of the approvals and permits required to implement the installation covered by the grid connection agreement (GCA) within 24 months from the date of the GCA; and the entry into agreements with the supply of major equipment used in the installation covered by the GCA within 36 months from the date of the GCA. In the event of failure to notify the DSO of the achievement of the above milestones, the GCA will be terminated for reasons attributable to the applicant. Furthermore, the duration of grid-connection conditions' validity is to be reduced to 1 year as to counteract the blocking of the connection capacity by installations that do not implement the issued grid-connection conditions.

- **In France**:

  The 2023 Renewable acceleration law ("APER") enables system operators to recover awarded but unused connection capacity. **If a consumer has not consumed up to its full awarded capacity within the last 5 years, the DSO reduces the maximum allowed connection capacity at 125 % of the maximum used capacity over the last years**. Consumers are informed each year of their newly allowed connection capacity. As a transitory measure, if a consumer, who had already been connected before this provision entered into force, requests a capacity increase, s/he will receive a discount of 60 % of the billed reinforcements that are needed (first time only).

  For consumption installations at low-voltage level, the customer has three months after accepting the quotation to complete the necessary construction works on his part. After this deadline, the DSO is allowed to claim a breach of the quotation and take the request out of the connection queue.

- **In the Netherlands, the Authority for Consumers and Markets** (ACM) has issued a code decision regarding unused transmission rights (Use-it-or-lose-it; GOTORK). This decision enables the grid operator to limit unnecessary transmission capacity (GTV) contracted by connected parties and make it available to other grid users. In addition, connected parties are encouraged to critically assess whether the maintained transmission capacity is necessary. To facilitate this, conditions are being added to the Electricity Grid Code. This set of conditions is referred to by the abbreviation GOTORK. Previously, the term 'use-it-or-lose-it' (UIOLI) was also used for this. By reducing the unnecessary transmission capacity of connected parties who do not (fully) use it, the grid operator gains more certainty about the future grid usage of its connected parties. This allows the grid operator to maintain smaller safety margins for the expected natural growth of the grid when determining future demand for transmission. Consequently, more transmission capacity can be allocated to parties that are waiting for it, such as housing developers or companies that want to make their operations more

sustainable.

- **In Member States (such as Portugal)** where DNDPs must be approved, delays in the approval process can lead to systemic bottlenecks in grid expansion and slow down the entire process of new project connections. Therefore, in these Member States, clearer approval timelines and framework for governments or competent authorities should be set to ensure timely connection of new users and generation capacity thanks to a more efficient network development.

3. Modification of existing grid connections

In some Member States, the modification of an existing grid connection requires the grid users to submit a new connection request, even in situations where the is no or only a limited increase in the contracted grid capacity.

* Do you encounter situations in which you are required to submit a new connection request for a limited modification of an existing connection?

- ☐ Yes
- ☒ To a certain extent
- ☐ No
- ☐ No reply

* Do you consider that the modification of an existing grid connection should be possible without having to fully re-apply?

- ☐ Yes
- ☒ To a certain extent
- ☐ No
- ☐ No reply

Can you provide a best practice from an EU Member State?

Please find below a list of non-exhaustive examples from Member States. However, given the complexity of the topic and the different situations within Members States a successful practice in one Member States does not necessarily mean that it can / should be replicated in another Member State (no one-size fits all approach):

In most countries **a new connection request is needed in case of an increase of contracted / connection capacity or a change of location**. Sharing this information via a reapplication is important since it affects the basis of the connection and ensures that DSOs can model the customer's effect on the network correctly. Also, other technical parameters (e.g. short circuit power, harmonics, load cycle) can influence grid behavior of installations so that a reapplication is necessary even in situations where only a limited increase in the contracted capacity is requested. However, usually, small modifications related to the connection solution or a decrease in capacity do not require an entirely new connection request. Indeed, regarding the example of small-scale connections, it can make economically sense to use a simplified application process to be defined at national level while in contrast larger connections become increasingly less standardized and more individual.

- In some countries, any modifications to the connection capacity induces changes. In the **Slovak Republic**, any change (increase) in connection capacity requires an amendment to the connection contract - there is no de minimis rule. In **Romania**, for any modification of the grid connection capacity, even in the case of a capacity increase, the change must be validated and considered by the DSO. Without proper control over the DSO's grid capacity map, the network may suffer serious damage, and the DSO may fail to comply with its performance standards.

- **In Italy,** the regulation governing the modification of existing connections is, in practice, similar to that for new connections, following an almost identical process.

- There are cases in **Greek legislation** where an increase in the installed capacity of photovoltaic stations is treated as a simple notification to the competent operator, provided that the available short-circuit power margin of the corresponding HV/MV transformer is not reduced by more than 10% (paragraph 6 of Article 97 of the Law 4951/2022). Additionally, Article 5 of the Law 4951/2022 includes provisions stating that a pending application for the granting of a grid connection offer is not considered a new application and does not need to be reclassified for examination.

- **In France, the need to re-apply depends on the nature of the modification.** If it is a minor modification, a complete reconsideration can be avoided as a simplification for both the customers and the DSO. If it is substantial (e.g. increase of the connected capacity, generators which could potentially disturb the grid), a full re-application and a new study is needed.
    - An example for generation: any increase of installed capacity with the same connected capacity demands a new study to assess protections, short-circuit power…
    - An example for consumption: if the modification is below the current connected capacity (including the revised connected capacity), no new study is needed. In any case, the framework on reconsidering a study needs to be clear as it is billed.

- In **Germany**, as a general rule any change (increase) in connection capacity requires an amendment to the connection contract. In case where a connection in LV is three-phase and usually has a potential maximum load of 30 kW, it is often possible however to increase the size of the fuse (by 5 or 10 kW) and thereby grant the customer's request for an increase (if capacity is available). The customer is charged for this increase according to the connection price sheet that must be published by the grid operator. The simplified processes and thresholds are defined at national level considering the national technical specifications (e.g., Niederspannungsanschlussverordnung Strom).

4. Non-discriminatory access to the grid in situations with insufficient grid capacity

1. Measures in case of lacking capacity

Lack of capacity is a new but spreading reality for European DSOs. There are several measures which Member States are starting to use to improve the handling of grid connection requests in such situations. These can be auctions and application windows but also the use of flexible connection agreements in line with Article 6a of the Electricity Directive, cable pooling (hybridisation) and others.

Please describe the measures you would suggest as suitable for handling grid connection requests in situations with **lacking capacity**. Please specify why you chose this option / these options and explain the benefits (and potential disadvantages) of the respective options.

DSO Entity:

To deal with a lack of capacity a whole toolbox of measures is available. The situation at hand will decide which measure might be the best for the specific case and situation in a respective Member State. Several of the measures below were already mentioned earlier in the response.

Non exhaustive list of possible measures:

1. **Flexible connection agreements (FCAs):** FCAs allow grid users to connect to the grid under conditions that may include temporary or conditional access, such as reduced capacity during peak times, the ability to curtail usage when necessary or a conditional release of the capacity when determined conditions are met. The benefits of FCAs are faster connections and fewer need for immediate grid upgrades, i.e. cost savings for users and grid operators. Potential challenges could be less certainty for investors due to potential curtailment and the requirements of existing advanced grid monitoring and control systems.

    - **Permanent FCA after assessment of proportionality**: If the total amount of reinforcement needed for a connection is unreasonably expensive (as assessed for example by a cap in €/MW), system operators should have the right to connect only with permanent FCA or forward all induced costs to the connection applicant. This would both send a locational price signal and avoid adverse effects where connection applicants bear only part of reinforcement costs while a significant part of the reinforcement costs is socialized (paid by connecting SO, subsidies…). As an example, in France, 7 MV storage projects with a total capacity of 20 MW induce 150 M€ reinforcement costs because they apply for connection in highly congested HV areas.

    - **Transitivity of FCA / coordination between the connection framework of DSOs and TSOs**. When the TSO cannot guarantee full capacity at any time, the DSO should be able to pass those limitations to DSO customers and implement related FCAs. For instance, the connection offer for storage on the DSO grid when TSO cannot guarantee full capacity should be an FCA.

2. **Milestone-Based Advancement (including mild use-it-or-lose-it policies):** Projects advance in the connection queue based on achieving specific milestones, such as obtaining permits or securing financing. The achievement of these milestones can be linked to the actual right to use the allocated capacity within a certain timeframe or lose their connection rights. This would avoid hoarding and encourage a timely development of the project as well as an economical use of capacity overtime (i.e. a data center is allocated a fraction of its final capacity first as it will take a while to get up and run.)

3. **Co-location / hybrid plants:** It refers to the practice of sharing grid connection points and infrastructure between multiple power plants or battery energy storage systems (BESS). The benefits are the optimization of the use of the grid's existing infrastructure.

    - The connection of hybrid plants under the same connection point / "POD" (Point of Delivery), without increasing the injection capacity contractualized, should be facilitated, allowing the possibility of connecting generation units from different sources with a connection capacity that is not the sum of the two maximum capacities but rather the maximum of the two production units. This virtuous measure would help address network saturation issues and enable operators to avoid requiring additional network capacity to install new renewable energy generation plants on existing PODs (e.g., new photovoltaic installations on the POD of an existing or developing wind farm), while allowing the TSO and DSO to optimize the use of the grids.

    - In areas with limited available grid connection requests for projects that incorporate energy storage or demand response capabilities capacity could be prioritised. This approach would help alleviate local grid congestion, enhance system flexibility, and support the efficient integration of renewable energy sources.

4. **Enhanced Coordination between TSOs and DSOs**: Improving coordination between TSOs and DSOs to ensure efficient capacity management. This would ensure that capacity is used efficiently across the entire grid and enhance the ability to plan and implement grid upgrades and expansions. This enhanced coordination could encompass the joint review of connection applications, to detect

double applications for the same overall projects (one connection application at higher voltage, and same project split in several sub-projects applying each for connection at lower voltages).

5. **Geographically dependent connection fees and/or locational signals** to incentive projects in areas where capacity is available rather than scarce. Location connection fees could be considered, i.e. deep connection fees in congested areas, and in general tools to give locational signals, e.g. higher fees for demand in areas that are already congested and lower in areas where there is an ample supply of capacity and energy.

6. **Auctions:** If only limited capacity is available, it is generally possible to auction this capacity off to the highest bidder. The idea being that the parties that show the highest willingness to pay should also have the highest utility from using the connection later. Careful design is necessary (e.g., to avoid winners' curse and other well-documented problems that may be faced by parties that take part in auctions). This tool should probably only be used within groups of users that have a similar interest and use for the connection (i.e., it is not sensible to have hospitals or universities and data centers in one auction). Also, a potential disadvantage of this measure is that it could be seen as contradictory to the public service mission of DSOs.

7. **Establishment of specific framework for very large demand connection requests (e.g. data centers):** Several DSOs are confronted with an increase in new very large requests for demand connections (e.g. data centers). Due to the extremely large, requested capacity, these requests can exhaust all available capacity in certain areas of the transmission grid, which in some cases are blocking all new connections of "regular customers" in the distribution grid for the foreseeable future. To prevent this, it would be important to establish a specific framework for connection of very large customers where the additional required capacity is specifically created, with a pre-determined timeline, without affecting the capacity for "normal requests" for connections.

8. **Application Windows:** Application for connection in higher voltage levels (especially HV but possibly also MV) are being collected and processed at one moment in time. Capacity is allocated only after all connection requests have been considered (e.g., once or twice a year). The benefits are information advantages and efficiency in grid development since the processing of the request is not done one after the other but at a single moment in time. This allows the system operator to create an information advantage for the planning process and enables them to react to all requests with an aligned strategy or expansion measures. Also, this would create transparency and predictability. The disadvantage of the measure is that if capacity is scarce and contested between applicants, the application window process needs to be combined with another allocation mechanism that can internalize the scarcity.

9. **Other more general measures:** (a) Raising awareness among users about the capacity/flexibility challenge and actively connecting with customers, companies and industries to find common solutions, (b) supporting new technologies and the use of smart energy management to make the electricity use more flexible and (c) usage of implicit flexibility (measures described above) and explicit flexibility / development of market-based flexibility.

Please provide concrete example, if available, for the respective potential solutions.

DSO Entity:

Please find below a list of non-exhaustive examples from Member States. However, given the complexity of the topic and the different situations within Members States a successful practice in one Member States does not necessarily mean that it can / should be replicated in another Member State (no one-size fits all approach):

Hungary:

- **Flexible connection agreements (FCAs)**: In the case of a new connection request, it may not be possible to provide the normal operational supply at the given location until after a significant network upgrade (the requested power can only be provided in the normal connection state of the network, not in a different - rarely occurring - operating state). In this case, the customer may request, and the DSO may offer the possibility of a so-called FCA. The essence of FCA is that, in order to achieve a lower cost or faster connection, the customer acknowledges that the DSO may impose a temporary limitation on the injection or withdrawal capacity of the network user. FCAs were initially used by Hungarian DSOs mainly for power plants connected to MV or HV network, but today they are used not only for generators, but also for storage and customers.

- **Co-location:** Regulatory framework for co-location is under development, the following key measures are planned:
  - A database of available connection points for co-location, published on the NRA's website and updated quarterly.
  - Market participant education, including an information session organized by the TSO.
  - A legal framework has been established, such as the inclusion of mandatory contractual elements in the electricity law's implementing regulation.
  - A dedicated FAQ section on the NRA's website to improve the understanding of co-location.

Slovak Republic:

- Flexible connectivity: A measure which is currently in the legislative proposal stage in Slovakia and which should be adopted by the end of this year.
- Currently the customer has to pay at least 50% of the reserved capacity, ideally, they would have to pay 100% of the reserved capacity.
- If the capacity that the applicant wants is not available, DSOs automatically offer a lower free capacity.
- Non-energy measures: Simplification of building permitting process which would allow DSOs to respond with more flexibly to the needs of the power grid.

Romania:

- Capacity Auctions: This solution will be active in Romania as of 2026.
- FCA: It is provided under an existing legislation in force and will be active as of 2026 after a common project between the DSO and TSO.
- Digital Grid Capacity Maps: This is active for one DSO in Romania for MV and HV grid.
- Grid reinforcement: Currently, there is possible under an active legislation but limited by the regulator's legislation.

Poland:

- **FCAs**: FCAs are introduced in the new proposal for a revised Energy Law (UC84 – refer to previous questions) and could be offered by the DSO as a temporary solution for investors when connection to the electricity grid would normally not be possible using existing infrastructure due to limitations in grid capacity. The DSO will be entitled to impose reasonable restrictions on the consumption or injection of electricity into the grid by the installation without being liable for the consequences of such curtailments. NRA are expected to publish guidelines for FCAs.

- **Auctions for grid capacity**: The new proposal for a revised Energy Law also provides for auctions for grid capacity. In the event of termination of a grid connection agreement (GCA) due to the applicant's failure to meet the project milestones, the relevant DSO will facilitate the conclusion of a new GCA through an auction process. This new GCA shall refer to the same grid connection location and to identical conditions as those of the installation covered by the terminated agreement (the type of equipment used may differ, but the connection power in the direction of energy intake or output shall be the same). The winner of the auction will be the entity that offers the highest price for 1 MW of connection capacity.

- **Cable-pooling facilitation**: The new law project set a new extension of cable pooling to all installations (including conventional energy sources). Currently, only renewable energy installations can benefit from the cable pooling mechanism, which excludes standalone battery energy storage systems as single components of the cable pooling framework as they do not qualify as RES installations.

Belgium (Flanders)

- Fluvius together with the TSO introduced a pilot project named "EnergieGrip"(Energy Grip). This means that they are in close collaboration with the industry to allow them to share information on what, how and when customers will modify and electrify their installations. This allows the system operators to have a more proactive and clear view of the plans of the sector and to timely plan, coordinate and prioritize grid reinforcements and to incorporate them in the Distribution Network Development Plan (DNDP).

France:

- In France, LV PV producers can connect before reinforcement is completed with a temporary FCA. Normally, a customer connected with temporary FCA is curtailed without compensation. However, to date, there is no command-and-control mechanism to enable to curtail such LV producers. In addition, engaging into contract management of LV customers is very costly when compared to the financial value at stakes. **Enedis will implement a mechanism where LV customers benefiting from FCA (due to HV or MV congestion) will pay a lumpsum (5,4 €/kW) at the time of connection to finance the flexibility provided by other flexible resources (such as compensated curtailment of MV producers or local services).** The lumpsum payment ensures a fair contribution of each producer where it is impossible to split in real time the share amount of congestion due to early connected producers to the congestion versus stemming from other possible reasons. It also alleviates loopholes if curtailment ceases to function on some producer site. It provides certainty on the business plan (alleviate the uncertainty on the actual curtailment, highly weather dependent). It minimizes the overall TOTEX in an overall collective welfare analysis to connect early producers (no need for command-and-control on LV producers and no need for back-office).

5. Requests from grid users below a certain size

* In your view, should connection requests from projects **below a certain size** be treated differently?

- ☐ Yes
- ☒ To a certain extent
- ☐ No
- ☐ No reply

DSO Entity:

In general, DSOs are neutral market facilitators that must apply the core principles of equal treatment and non-discrimination in their management of grid connection requests. However, a different approach with very limited derogations could be considered for certain projects when the size of the requests can justify it. Such an approach could be considered for the connection of very small generation devices or very large requests for demand connections (e.g. GW-sized facilities like data centers rather connected at medium- and high-voltage levels). The differentiation could be reflected in procedure simplification, adapted framework, detailed information provided under the grid connection study, etc. depending on the characteristics of the request.

- **In the case of small devices**, it makes economically sense to use a simplified process but any threshold should be defined at Member State level considering national technical specifications. In Italy for instance, a differentiated approach was established based on the size of the request especially for generators, as to discourage the connection requests for plants from non-renewable sources and encourage the connection of small plants and hence distributed generation. This differentiation applies to generators with power below 800 W who can submit a request with a single form and without connection fee required as well as for photovoltaic production plants with power below 200 kW and high-efficiency cogeneration plants with power below 50 kW who can request connection with a simplified procedure and pay a fixed lump sum. Any other production plants different from the previous ones from renewable follow an ordinary procedure and pay a lump sum fee based on the power requested for injection to obtain the quote (connection fee). In Belgium (Flanders), there is a “fit-and-forget” policy for small renewable generators (mainly PV) under 10 kW (5kW mono phase), meaning that the installation of such installations on existing connections can be done within the available connection capacity without connection request.

- **In the case of very large requests for demand connection**, the significant grid capacity requested can exhaust all available capacity in certain areas of the transmission grid, which in some cases blocks all new connections of regular customers to the distribution grid for the foreseeable future. To prevent this, a specific framework for the connection of very large customers should be set where the additional required capacity is specifically created, with a pre-determined timeline, without affecting the capacity for “normal requests” for connections.

6. Deviation from the first-come, first-served approach in favour of a system with objective criteria

Although many Member States apply a first-come, first-served approach to connection requests, this is not required specifically by EU legislation (see Article 6 of the Electricity Directive 2019/944 on third-party access).

Indeed, certain projects when connected to the grid can deliver benefits to the grid and the electricity system and alleviate congestion.

Some projects contribute to the energy and climate transition.

Other projects relate to services are of general interest to the society. Such as public transport, postal services, and healthcare. These services can be economic (e.g. postal services), non-economic (e.g. police and justice) and social.

* Would you see any merit in setting up transparent criteria for treating connection requests based on their contribution to alleviating congestion in the electricity grid?

- ☒ Yes
- ☐ To a certain extent
- ☐ No
- ☐ No reply

* Would you see any merit in setting up transparent criteria for treating connection requests based on their potential contribution to the clean energy transition, or their contribution to services of general interest or any other?

- ☐ Yes
- ☒ To a certain extent
- ☐ No
- ☐ No reply

DSO Entity:

The significant increase in the number of grid connection requests (e.g. Latvia and Romania experienced an increase of applications to the DSO grid of respectively 1400% and 750% between 2021 and 2022) represents a growing challenge for DSOs and is increasingly showing the limits of the 'first-come, first-served' approach especially in situations where there is (temporary) lacking or scarce capacity with long connection queues. While this approach seems no longer the most efficient way to manage requests, any selection criteria for prioritizing the connection and access to grid for certain projects needs to be a decision taken by national governments and competent authorities to provide a legal framework for DSOs to manage requests effectively. However, the expertise of grid operators should be included in the deliberation / consultation process of the government/regulator.

As neutral market facilitators DSOs manage grid connection requests in a non-discriminatory and transparent manner which is currently reflected in most Member States in a 'first-come, first-served' approach. If **Member States decide to move away from the first-come, first served approach, they should – after a consultation process including grid operators - provide clear guidance for a fair and transparent framework for the prioritization of grid connection requests**, leaving no room for interpretation. Any preference criteria should be easy to apply, be kept free of contradiction and must not be subject to interpretations. The introduction of such criteria must not create a situation in which the decisions to give preference are contested in courts regularly. It is also important to note that conditions for grid connection are dynamic and therefore preference criteria should not prevent a certain flexibility. This extreme variability along with dynamic and continuously changing market conditions necessitate to guarantee innovative and flexible approach.

- As another example, in **France**, since 2023, the 2023 Renewable acceleration law ("APER") has given power to the "Préfet" (State representative) of the administrative region to modify the order in the queue to accelerate the decarbonisation and electrification of large industrial areas. The TSO is currently studying the possibility of prioritising the connection of future clients near its substations (faster and cheaper).
- In **the Netherlands,** they introduced a regulation on prioritization: Codebesluit volgorde na prioriteren | ACM (Code Decision on Order After Prioritization). The Netherlands Authority for Consumers and Markets (ACM) adopted a code decision on changing the order in which transport capacity is allocated after prioritizing transport requests, following a proposal from the Dutch grid operator (Netbeheer Nederland). With this code decision, the ACM amends the Electricity Grid Code. On 18 April 2024, the ACM published the code decision on prioritization of transport requests, which entered into force on 1 October 2024. The code decision on prioritization of transport requests stipulates the following: when allocating transport capacity the grid operator must use the order of the priority assigned to the grid operator considering the priority of customer categories (1. helping to avoid congestion, 2. contribute to national security, 3. provide basic needs) entitled to prioritization.

7. Transparency on grid hosting capacity

Transparency on grid hosting capacity in respective areas together with applicable connection charges can steer investment decisions into locations with less congestion or with expected grid development. In this context, the Grids Action Plan mandated the EU DSO entity and the ENTSO-E to come forward with harmonised definitions for available grid hosting capacity for system operators and to establish a pan-EU overview of grid hosting capacity maps and websites.

* Do you consider existing actions on grid hosting capacity on a EU level sufficient?

- ☒ Yes
- ☐ To a certain extent
- ☐ No
- ☐ No reply

DSO Entity:

DSO Entity considers the existing actions at EU level on grid hosting capacity to be sufficient. Substantial progress has been made under the current legal framework, both through the work carried out jointly by

DSO Entity and ENTSO-E, and through the efforts of Member States. The current framework provides the necessary guidance and incentives for system operators to publish grid hosting capacity information.

In line with the Grids Action Plan, the joint deliverables prepared by DSO Entity and ENTSO-E offer a well-balanced and efficient way forward. They build on what has already been achieved and provide space for further innovation, without disrupting functioning systems or imposing unnecessary complexity.

This progress reflects a strong commitment from system operators to increase transparency and support better-informed investment decisions. The existing flexibility within the framework enables system operators to adapt to specific local conditions while using network calculating methodologies and tools that best match their network characteristics and possibilities. This diversity has led to innovative and efficient solutions in many regions, allowing for continuous improvement and faster evolvement of grid capacity information.

Allowing flexibility rather than enforcing a uniform, prescriptive approach across all system operators would better accommodate the diverse needs of system operators and sustain positive momentum. Due to the highly dynamic and context-dependent nature of hosting capacity calculations and data, imposing top-down rules on how to calculate and present this information could lead to inefficiencies, unnecessary administrative burdens, and a loss of room for innovation. It may also disincentivise those operators who have already invested in and developed effective processes under the current framework.

8. Further comments

Do you have any other comments?

If you have any document you would like to share, please upload it here

- DSO Entity's presentation delivered on 27/6: Available here.
- Grid Connection Paper: Available here.