Roundtable 1 - Conclusions
Integration of EV to the grid: Challenges & opportunities related to the connection procedures

Eurelectric has launched a series of Roundtables dedicated to increasing visibility of DSOs viewpoints and perspective on the issues pertaining to the whole E-Mobility ecosystem, reuniting the members of the E-Mobility ecosystem, identifying the bottlenecks pertaining to the deployment of E-Mobility in relation to the distribution grids and bringing forward policy recommendations that could alleviate them.

Introduction:

The first Roundtable was dedicated to challenges and opportunities related to the connection procedures and was preceded by a survey where participants were providing valuable input for the discussions. The roundtable was divided into three parts: digitalisation of the application process, standardisation of procedures and finally open dialogue and cooperation among the relevant parties. It is to be noted that the discussions of this roundtable mainly focus on public charging.

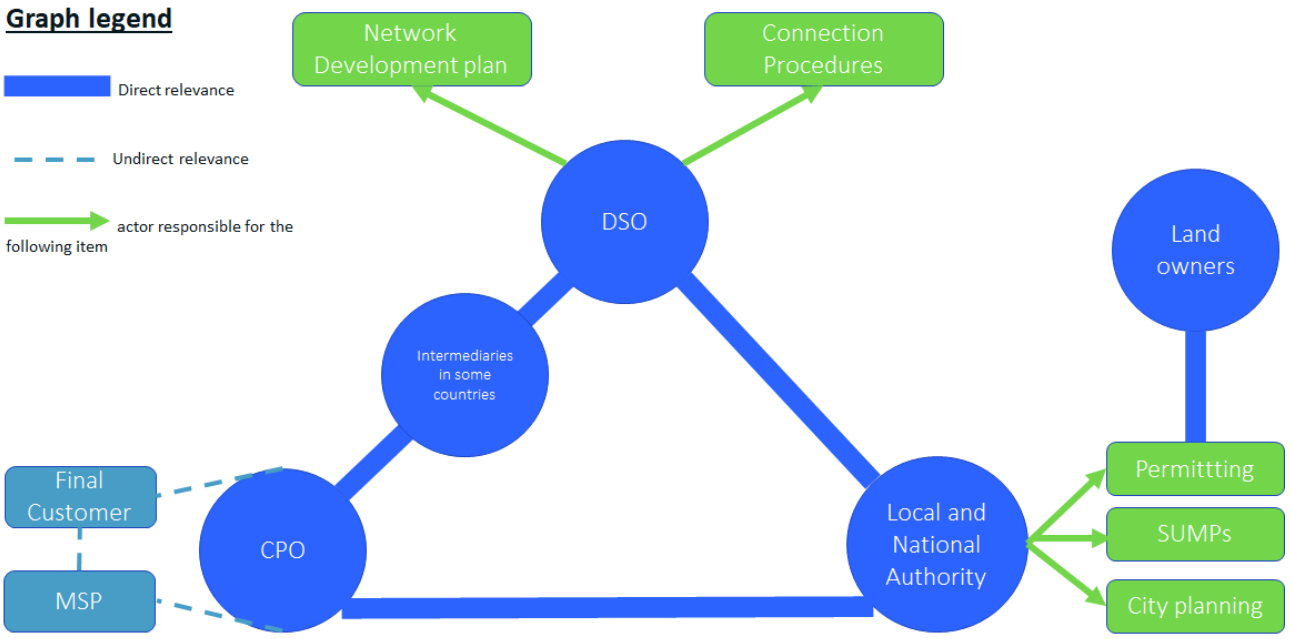
During the first roundtable, participants have reached the conclusion that connection procedures often represent a bottleneck to the ramping up of EV charging infrastructure which highlights the importance of digitalisation, standardisation of procedures and the need of an open dialogue and cooperation between the public authorities, DSOs and CPOs. Connection procedures are sometimes so lengthy that CPO might have to change their original plans which jeopardise their activity. The critical point is not the connection itself but the activities related to the authorization / installation of the charging point, which in a lot of cases accounts for the vast majority of the lead time for the connection. It is important that the activities related to the authorization / installation of the charging point do not endanger business opportunities.

As a preliminary note, we are recalling some core tasks pertaining to the DSOs as set in the European legislation:

- "*In any event, the distribution system operator shall not discriminate between system users or classes of system users, particularly in favour of its related undertakings*." Article 31(2) of the Electricity Directive
- "*The distribution system operator shall provide system users with the information they need for efficient access to, including use of, the system*." Article 31(3) of the Electricity Directive
- *"Member States shall ensure that distribution system operators cooperate on a non-discriminatory basis with any undertaking that owns, develops, operates or manages recharging points for electric vehicles, including with regard to connection to the grid"*. Article 33 of the Electricity Directive

In addition, we are proposing the following definitions to build a common understanding for connection procedures: **it describes the process starting from the reception of an application of a charging point to the full treatment of that request meaning actual activation of a charging point**.

Connection procedures primarily involve DSOs (Distribution System Operator), CPOs (Charging Point Operators), public authorities (national and/or local) and landowners. In some countries, some other actors or intermediaries also take part in the process. [1]



Last but not least, with regards the connection charges, Eurelectric would like to recall that there is no definite approach in terms of charging regimes set out in European or national law. In a report released in 2018[2], Eurelectric has identified 3 types of connection charges with a focus on producers connecting to the grid [3]:

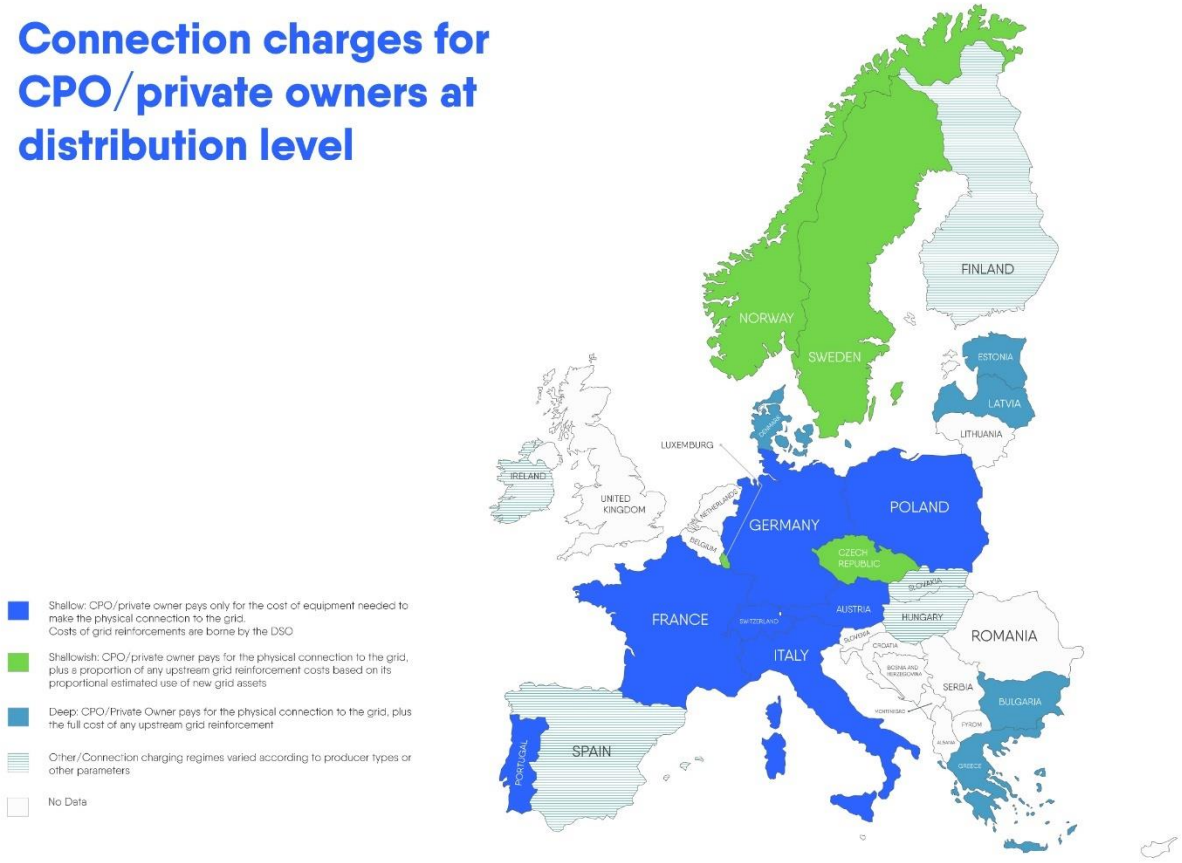
- **Shallow fees** where the applicant (CPO/Private Owner) pays only for the cost of equipment needed to make the physical connection to the grid. The costs of grid reinforcements are borne by the DSO i.e., they are part of the network fee calculation
- **Shallowish fees** where the applicant (CPO/Private Owner) pays for the physical connection to the grid, plus a proportion of any upstream grid reinforcement costs based on its proportional estimated use of new grid assets

[1] For instance, in Portugal, the current regulatory framework requires the participation of an intermediary (the Electric Mobility Management Entity - "Mobi.e") that altogether with DSOs also takes a part on the process of making available and commissioning publicly accessible charging points. Mobi.e centralizes all information regarding the charging sessions in publicly accessible charging points, which is later sent to DSOs for the settlement of electricity of the charging sessions, that will be charged to the MSP of choice of the EV drivers. Under the current regulatory framework in Portugal, all CPOs are required to be connected to Mobi.e and share all the information of each charging session. Likewise, MSPs are also required to be connected to Mobi.e so that EV drivers may be able to charge at any publicly charging point. While this system allows full interoperability in the public network, the dense information flow between all involved parties does increase operational burden and doesn't currently allow the use of different tariffs to induce CPO to promote a change of behavior in their charging points.

[2] https://cdn.eurelectric.org/media/3440/charges-for-producers-connected-to-distribution-systems-lr-2018-2322-0001-01-e-h-1B7D0BD3.pdf

[3] While the situation might be different for "demand" connections in some instances, the general differentiation logic defined in the 2018 report should apply on the demand side.

- **Deep fees** where the applicant (CPO/Private Owner) pays for the physical connection to the grid, plus the full cost of any upstream grid reinforcement



1. Regarding digitalisation of the application process

The discussions highlighted the importance of the use of digital tools for new charging point request. Paperwork and administrative burdens have consistently been one of the causes for the installation delays of new charging points. **There is a strong consensus on the importance of digital tools and digitalisation as a mean to streamline procedures while making them more transparent from the applicants' point of view too. Digitalisation of procedures should foster smart, transparent processes supported by a dedicated timeframe.**

Proposed solutions:

- Achieve the digitalisation of procedures by systematizing the use of **DSO digital portals as well as online portals from the relevant public authority** to track progress at the different steps of the connection procedure.
- Introduce, as a best practice, the **ticketing system**, explaining in detail the state of each process is therefore welcomed. A ticketing system is **a management tool that processes and catalogs customer service requests:** the CPOs send its request, then receives a ticket disclosing who oversees his request and what are the next steps. The ticket is then updated as the request is being treated.

- Promote the use of **one stop shop** to streamline the application procedure between CPOs and DSOs as well as between Public Authorities and DSOs.

However, **digitalising procedures has a cost that cannot be neglected**. DSOs explained that since costs of digitalisation are countable, **they need be incorporated in their OPEX/CAPEX plan** and should be turned into revenues rather sooner than later. I.e., if supported by the right financial and/or regulatory tools, digitalisation of procedures for DSO is achievable. Digitalisation can therefore only happen if it is being supported by the necessary financial tools (e.g EU funds or national regulatory schemes) and recognised as an investment covered by the distribution tariff as it aims at facilitating innovation in the interest of consumers as per Article 18 of the Electricity Regulation. Digitalisation costs should go beyond grid connection and spread out over other users and public authorities in the benefit of everyone.

Digitalisation needs to be incentivised mainly through minimum standards based on a timetable structured around time-based KPIs focusing on the level of digitalisation and to a lesser extent sharing of best practices. Respecting a KPI tracking how digitalised procedures are will ultimately speed up connections. The lack of standardised processes for municipalities and local authorities creates unnecessary burdens that could be alleviated through the introduction of minimum requirements for process digitalisation for municipalities. Digitalisation needs to be promoted by the use of legislation on the basis of a predefined formatted framework decided at national level on the basis of guidelines issued at EU level.

Finally, digitalisation of procedures should be a first step to a full digitalisation (i.e., digitalisation of both front end and back end) that would allow automatized process based on calculation software that would help grid optimization.

Proposed solutions:

- **Amend the article 18 of the Electricity Regulation n°2019/943** "charges for access to networks, use of network and reinforcement" to explicitly integrate the cost related to the digitalisation of connection procedures into the network charges for access to the network. National Regulation should be designed in a way that makes sure that DSOs recover all costs related to digitalisation.

- **Amend the article 33 of the Electricity Directive n°2019/944** "Integration of electromobility to the electricity networks" to mandate the Member State setting up minimum standards based on time-based KPIs focusing on the level of digitalisation of connection procedures for DSOs. These minimum standards shall be defined after a consultation process involving DSOs and market parties.

2. Regarding standardisation of procedures

It is of key importance to streamline permitting/ connection procedures issued by public authorities/DSOs for the request of a new charging point to decrease the amount of time needed for a new connection.

Key elements of standardised procedures should include:

- **A Timeframe setting**

It is important that the entity who requested the connection point could obtain automatically up to date information on the step process, its current status (e.g., waiting for municipal permit) and an updated timeframe stating the expected time for the conclusion of the process step. Better synchronisation of

construction permits and grid connections is absolutely key, including a timeframe as a best estimate for overall completion of a process. [4]

- **A Transparent Methodology on the status report of new request**

Transparency is a key element in the Methodology of the status report of new request. This transparency would allow forward planning and network development plans for all involved parties. Transparency is crucial not only for CPOs but also for OEMs, fleet operators, logistic corporations in the development of their activity and which ultimately impacts the EV ramp-up. We are welcoming the sharing of **advanced information and heat maps** to help CPOs know in advance and incorporate information in their site selection methodology. As a best practice, In the **United Kingdom**, UK Open Power Networks provides detailed maps of the grid capacity for recharging points (50kW, 100kW, 150kW). This initiative reveals cost-optimal locations that need the least public support. This helps both private users and public authorities to make better decisions.

- **A Methodology on the sharing of data**

The Methodology on the Sharing of data should be supported using a common platform, e.g DSO portals and the **information displayed shall be equally accessible to all interested parties and must not be dependent on manual updates of information**. Taking into consideration the fact that data is a whole topic of discussion in itself and raises issues such as protection of data, we consider data interoperability to be a central element in the methodology while the sharing of best practices is welcomed.

The implementation of a standardised procedures framework should be set up at national level on the basis of guidelines issued at EU level. It should take the form in a dedicated piece of national legislation.

Proposed solutions:

- **Create a new provision in the upcoming revision of the Electricity Directive 2019/944 related to the standardisation of grid connection procedures so as to request the setting up of guidelines at national level for standardised processes focusing on a mandatory timeframe best estimate from DSOs and on transparency for a methodology on the status report of new requests.** However, it should be taken into consideration that standardized grid connection procedure are sometimes already defined in national regulations.

- **Amend Article 13.1 of AFIR so that so that National Policy Frameworks contain a mandatory timeframe best estimate for public administration authorizing the installation of charging points on public soil as a** policy tool necessary to ensure that National Government achieve the mandatory EV infrastructure targets and objectives. However, it should be taken into consideration this mandatory obligation is sometimes already defined in national regulations.

- **Further explore a derogation to Article 31.2 of the Electricity Directive allowing public authorities to favour the connection of particular assets to achieve decarbonisation objectives**. While we want to reaffirm that DSOs are neutral market facilitators and shall remain as such, we understand the importance of political decisions from public authorities to steer the economy towards a greener future.

[4] https://dgmap.ukpowernetworks.co.uk/site/?q=ev_ext

- **Support response-timing requirements for the Public Administration** in the current Council Regulation laying down a framework to accelerate the deployment of RES/in a similar manner to what is proposed in the current Council Regulation laying down a framework to accelerate the deployment of RES.

- **Promote the introduction of a ticketing system involving public authorities** as a best practice among the E Mobility and Power industries relating to the status report of new requests.

- **Create fair and transparent data access requirements** (e.g. DSO portals) and specific data points to be provided in the ongoing drafting of Implementing Acts on data access & interoperability as set in article 24 of the Electricity Directive 2019/944 "Interoperability requirements and procedures for access to data", when not already done.

- **Support the implementation at EU level of One-stop-shop platforms (cf Italian example with Simplification Decree):** To make the entire process, from its very first step (grid request) to the installation on the field, more fluid/dynamic, DSOs, Municipalities, CPOs and other relevant agents should have a digital and integrated platform dedicated to e-mobility to organize all related and interconnected processes and enable progress tracking of each process, as well as to provide specialized support to the entities/companies involved.

3. Regarding open dialogue and cooperation among interested parties

The discussions highlighted the importance of **a close coordinated contact between public authorities, DSOs and CPOs.** It is of mutual benefit since public authorities will benefit from the DSO expertise while DSOs and CPOs have the opportunity to accelerate the EV Charging Infrastructure ramp-up.

We welcome the use of **dedicated platforms by relevant public authorities** that would aim at:

- **creating a transversal working group** within the DSO to follow-up any issues regarding the connection of charging stations
- **fostering dialogue with the municipalities** to manage other network construction needs with the connection of charging stations to facilitate the permitting and connection process
- **helping to implement and share digital and automatic tools** that could give previous information regarding the connection of charging stations in different locations (map based). From the public authorities' side, **Sustainable Urban Mobility Plans (SUMPs)**[5] are relevant tools to foster cooperation and involvement with DSOs and CPOs. When used to their full potential, SUMPs can really translate into an iterative approach with DSOs and other relevant economic actors from the start, thus allowing forward-looking planning and forward-looking building of networks on the short, medium and long term. As a best practice, **Sweden** has developed an integrated approach to planning & installation - preparation with groundworks & cabling is done ahead of charge point installation in Stockholm. [6]

Proposed solutions:

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52013DC0913

[6] https://tillstand.stockholm/tillstand-regler-och-tillsyn/parkering/ansok-om-att-etablera-nya-laddplatser-for-elbil/anmal-intresse-for-att-satta-upp-nya-laddare/#step-1

- **Advise DG MOVE** on EV charging infrastructure-related issues **by showcasing best practices of public authorities supporting the deployment of recharging infrastructure** (final report in progress) [7] in the **Sustainable Transport Forum sub-group** so as to ensure streamlined and effective coordination between national, regional, and municipal levels regarding the roles and responsibilities of each competent stakeholder in relation to the relevant legislative files applicable to the permitting and grid connection procedures necessary to the deployment of recharging infrastructure.
- Revise the **Communication of the Urban Mobility Package** that sets up the definition and implementation conditions of SUMPs under its 3rd paragraph so to integrate that **SUMPS shall be coordinated with DSOs network development plans, and vice versa**, and that SUMPs shall prescribe mandatory consultations with DSOs and CPOs.
- **Include a clear prioritisation for the cooperation of public authorities with DSOs** in preparing for network development, in particular in view of improving data transparency for siting decisions for charging service providers/charge point operators, e.g. through hosting capacity maps.
- Push forward the idea that Regulators, TSOs and DSOs shall **periodically assess** how charging points could be integrated for the **better use of RES generation and V2G functionalities***.

[7] https://transport.ec.europa.eu/transport-themes/clean-transport-urban-transport/sustainable-transport-forum-stf/active-sub-groups/sub-group-best-practices-public-authorities-support-deployment-recharging-infrastructure_en

**The recommendation echoes Article 14 of AFIR which is currently under revision as the document is released*