



Charges for Producers connected to Distribution Systems – State of play and policy recommendations

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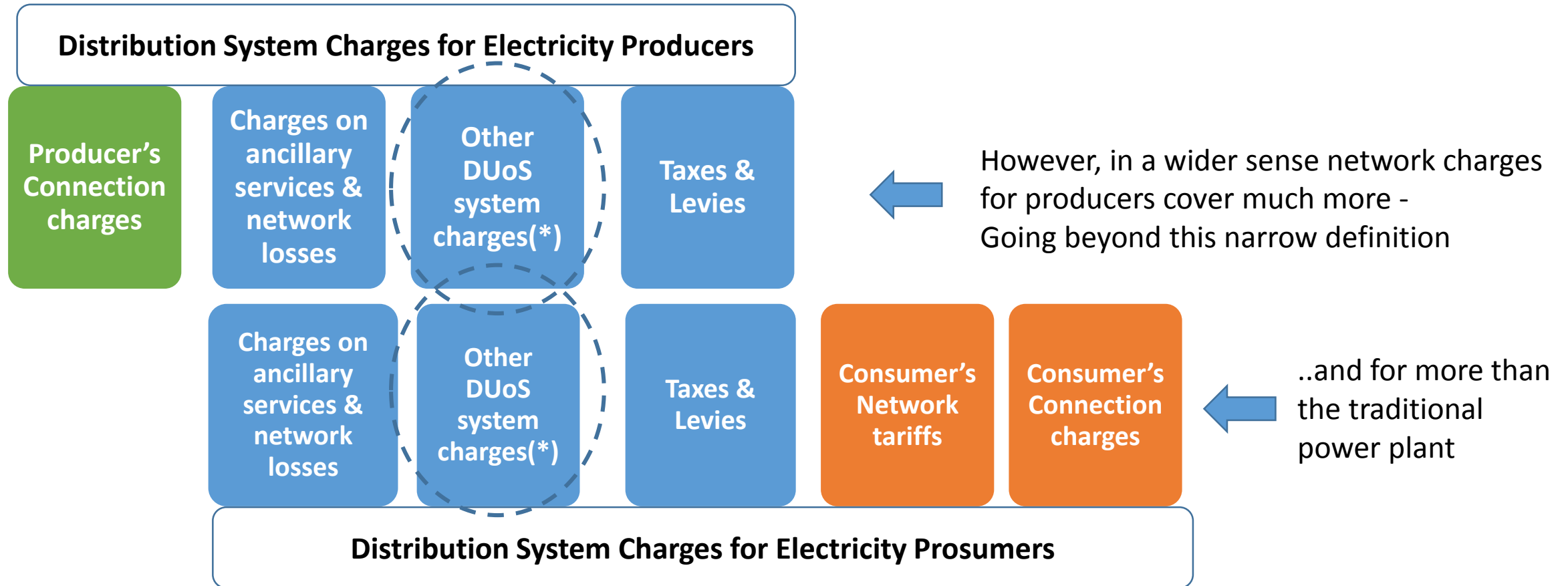
INDEX

1. **Overview** – What are these charges and what do we know about them?
2. **Our work – Main findings** of the upcoming Eurelectric report
3. **Issues** – Potential problems arising – status in the different Member States
4. **Our work – Policy recommendations** from the upcoming Eurelectric report
5. **Next steps & further considerations** – Where follow-up work is required

1. Overview – What are these charges and what do we know about them ?

- **Increasing numbers of electricity producers** connected to the distribution system.
 - **DER in place:** RES, prosumers..
 - **New DER:** charging stations for electric vehicles, storage facilities
- DER will participate in the wholesale market **with competitive terms**
- Information available at transmission level, but no information / reference study so far at distribution level

1. Overview – What are these charges and what do we know about them?



(*) equivalent to producer charges at TSO-level according to Regulation 838/2010 , Part B point 2 (ACER: G-Charge)

1. Overview – What are these charges and what do we know about them?

eurelectric's project

Project group: 19 members from 16 countries

Members from: DSO, market & retail businesses

Survey: 28 responses from 22 countries

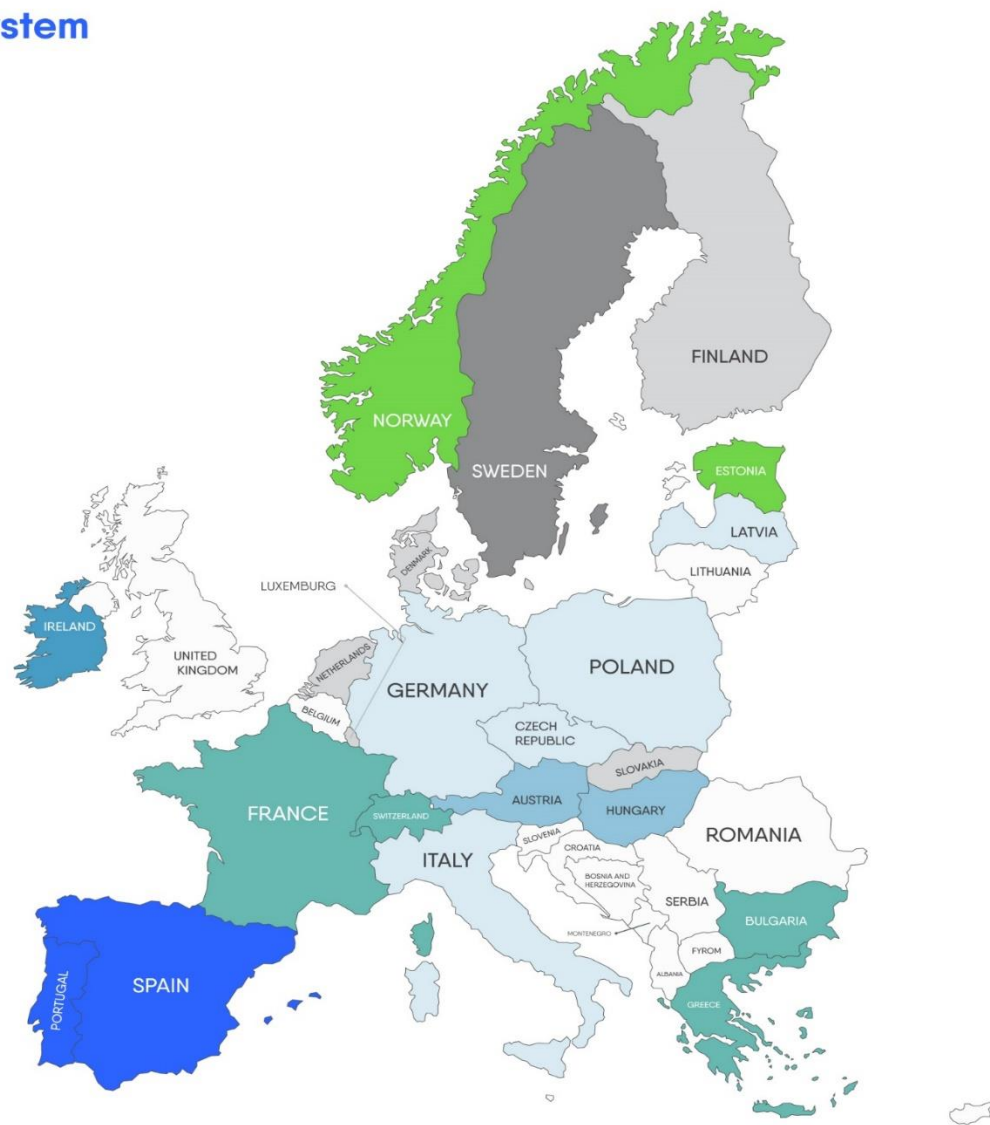
Upcoming report consisting of:

- Charges for conventional & RES electricity producers connected at distribution level
- Connection charges
- Charges related to prosumers
- Case studies from 5 countries: Slovakia, Sweden, Spain, Portugal, Norway
- Detailed country data

2. Our work – Main findings (producers)

Categories of Distribution System Charges applied in the EU

- Ancillary Services, Network Losses, Taxes, Fees and Levies and other DUoS charges
- Ancillary Services, Network Losses, and other DUoS charges
- Network Losses, Taxes, Fees and Levies and other DUoS charges
- Taxes, Fees and Levies and other DUoS charges
- Network Losses and other DUoS charges
- Ancillary Services and Network Losses
- Ancillary Services
- Other DUoS charges
- No Distribution System charges applied
- No Data



There is a **variety of system charging regimes applied** across distribution systems in the EU. In many cases these charges are not mirrored at the transmission level within a country.

-> **This diversity stems from different local conditions at the distribution level in the various Member States.**

2. Our work – Main findings (producers)

Overview on other Distribution Use of System charges (oDUoS) and what cost elements they cover



In many countries, a **variety of “oDUoS charges”** are borne by producers in order to cover costs caused by the generation unit, e.g. operation and maintenance costs, metering costs, overhead costs etc. but also, in some countries, to cover costs not caused by generators (e.g. in order to cover a share of DSO costs).

2. Our work – Main findings (producers)

Connection charges for generators at distribution level

- Shallow: Producer pays only for the cost of equipment needed to make the physical connection to the grid. Costs of grid reinforcements are borne by the DSO
- Shallowish: Producer 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
- Deep: Producer 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
- ▨ Other/Connection charging regimes varied according to producer types or other parameters
- No Data



There are **different connection charging schemes applied to producers** connected to the distribution systems of Member States **and they are either shallow, shallowish or deep.**

2. Our work – Main findings (producers)

Connection charges for generators at transmission level



In contrast, connection charges at transmission level are usually shallow across the EU.

2. Our work – Main findings (producers)

Prosumers – General overview

- Prosumers who can inject electricity into the network and get remunerated
- Prosumers who can inject electricity into the network without remuneration
- Other arrangements/ various types Prosumers existing which either can or cannot inject electricity into the network with hybrid remuneration regimes
- Prosumers who can inject electricity into the network with hybrid remuneration regimes (in some cases remunerated)
- No Prosumers present so far
- No Data

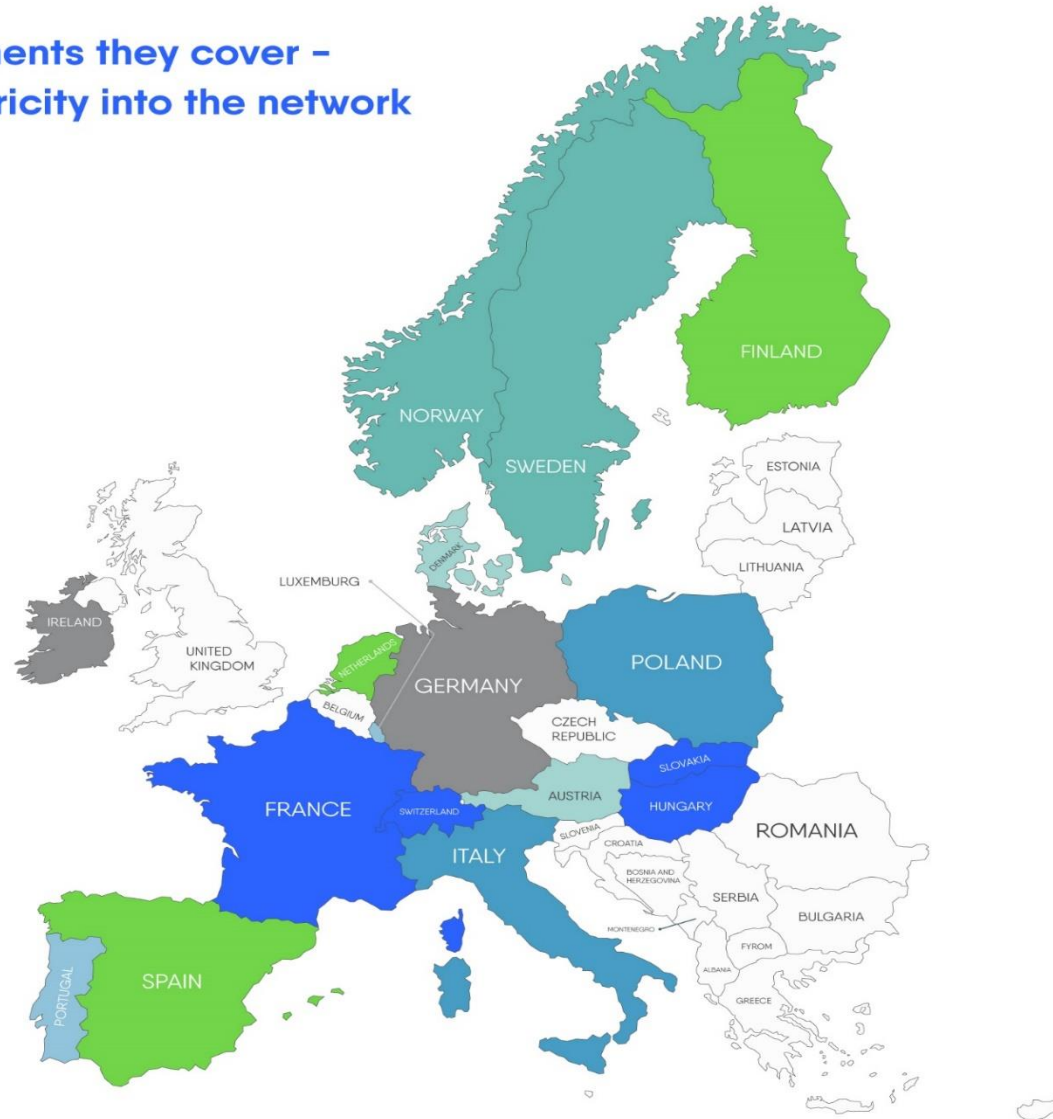


Various types of prosumers & remuneration schemes among Member-States

2. Our work – Main findings

Prosumers' charges and what cost elements they cover – The case of Prosumers who inject electricity into the network and get remunerated

- Network Losses, Ancillary Services, Taxes, Fees and Levies and other charges
- Network Losses, Ancillary Services and other charges
- Ancillary Services, Taxes, Fees and Levies and other charges
- Network Losses
- Taxes, Fees and Levies
- Other charges
- No prosumer-specific distribution system charges
- Not applicable or no data



3. Issues – Potential problems arising from Other Distribution Use-of-System charges – status in the different Member States

Main potential issues:

1. Affecting a business case (unduly)
2. Market distortions & hidden costs at distribution level
3. Are they suitable for new producers categories, such as prosumers ?

G-charges set-up at TSO level:

Country	energy produced [€/MWh]	power connected [€/MW]
Denmark	0.40	-
Finland	0.50	-
France	0.19	-
Great Britain	-	6,994
Ireland	-	5,590
Northern Ireland	-	5,590
Portugal	0.50	-
Romania	1.93	-
Spain	0.50	-
Sweden	-	4,090

ACER's Opinion 12/2015 "that energy-based G-charges should not be used to recover infrastructure costs and should be set to €0/MWh



Amending the relevant legislation in line with Regulation 838/2010

4. Our work – Policy recommendations from the Upcoming Eurelectric report

1. **Due to different local conditions at the distribution level in the various Member States a differentiated approach appears to be the most efficient solution to distribution system charges for electricity producers** at present. Therefore, a EU-wide harmonisation of these charge types is currently not practicable.
2. However, **some general principles can be identified** and should be followed to avoid unnecessary market distortions and ensure a level playing field for generators:
 - Distribution system charges, if applied, shall be cost reflective and transparent on all voltage levels, meaning that the range of cost elements to be covered by the respective charging regime shall be clear to all generators.
 - Generators coming from one country should not face any additional costs stemming from distribution system charges, when participating in the same regional market with competitors coming from other countries.
3. Although taxation is a matter of individual member states, **general principles of transparency and cost-reflectiveness** should apply when it comes to the **taxes and levies borne by generators at distribution level**.
4. The same is valid for “**oDUoS charges**” to provide further clarity and predictability for market participants across the EU & should cover other cost-items, which are not related to them.
5. **Connection charges should be adequately applied and reflect the grid reinforcements necessary** to connect any new production facilities, while taking into account the grid topology and robustness of the power system in question.
6. **Prosumers should contribute to the network cost recovery in a proportionate way**, to avoid other network users bearing a share of the Prosumers’ costs and ultimately to ensure a level playing field.

4. Next steps & further considerations – where follow-up work is required

For future consideration:

- **Further analyses are needed on overall charging regimes which include prosumers:** how they should be designed to be ultimately proportionate and cost reflective, compared to other electricity producers.
- **Further analyses on charging policies for storage facilities** are needed in view of the likely increase of these facilities at DSO level - **help avoid unfair treatments** in terms of double charging regimes, such as in cases where storage is charged e.g. for ancillary services, although it provides these services to the network.
- Further analysis, is needed on EV charging points, who apart from consumption points can also function as storage and inject back to the network.

Questions ?