



Prosumers in National Energy and Climate Plans (NECPs) – what is key in 2018 and beyond?

Webinar on 18
September 2018

**Prosumers – how to
define objectives and
trajectories?**
Slides eco-union





Agenda

Time	Item	Presenter
10:30	Welcome and introduction	Giorgia Rambelli, ICLEI Europe
10:35	EU Clean Energy Package (Winter Package), new national planning tools and prosumers	Marta Toporek, ClientEarth
10:50	How can NECPs influence national policies on prosumers?	N.N., RESCoop
11:05	Prosumers – how to define objectives and trajectories?	Kristian Petrick, eco-union
11:15	Brief overview of some European-wide (Brussels based) NGO initiatives on NECPs	moderated by Kristian Petrick, eco-union
11:25	How can prosumer initiatives be involved in the process of NECPs drafting?	Sebastian Bechtle, Client Earth
11:35	Q&A and discussion	moderated by Giorgia Rambelli, ICLEI Europe
11:50	How the PROSEU project is going to work further on NECPs? Next steps and closing remarks	Kristian Petrick, Eco-union
12:00	End of webinar	



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How to define objectives and trajectories?

According to the Governance Regulation, MS shall report:

"if applicable ... national trajectories and objectives such as [...] renewable energy produced by cities, energy communities and self-consumers..." (Art. 18.a.5, Annex I.2.7)

What are desirable and realistic objectives?

Prosumers beyond self-consumption – the generation potential of prosumers

- Important note: While the REDII and the GR use the term “self-consumers”, they do allow generation beyond self-consumption.
- Solar PV is the RE technology useful for both *individual* prosumers and energy communities

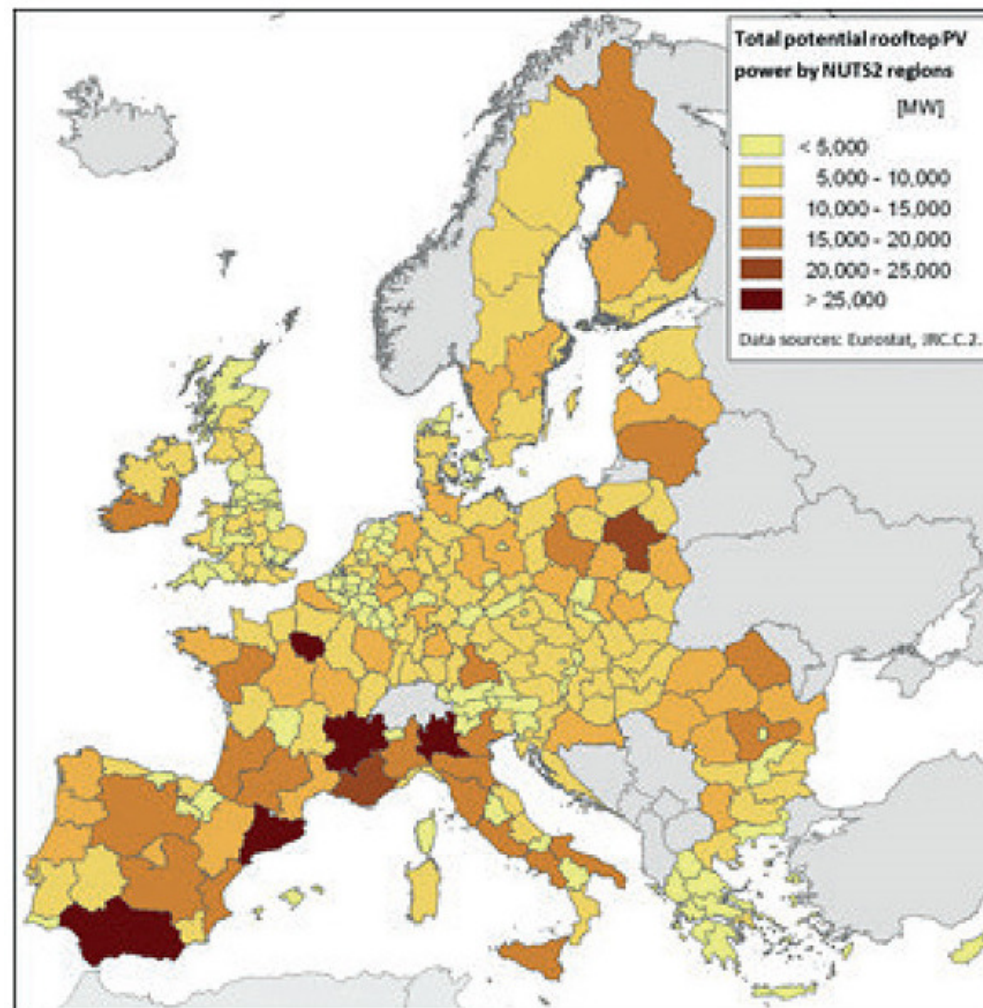
Basically any suitable PV roof-top could be used by prosumers and would fall thus under the self-consumption and energy community legislation.

What is then the prosumer potential?

The PV rooftop potential in Europe is large

- *Residential* roofs: 238 GW (EC study 2017)
- *Urban* areas: 500 GW in (IEA ETP 2016)
 - Apparently does not include rural areas
- All roofs: xx GW (still waiting for total number from EC JRC 2018)
 - See graphic on next slide
- **For comparison:**
 - Current total PV capacity in Europe: about 108 GW
 - Current PV rooftop capacity: about 17 GW
 - Equals 7% of *residential* potential, likely to be below 4% of total rooftop potential
 - Estimated PV rooftop capacity in 2030: 32 GW according to EC study
 - Equals 13% of residential potential

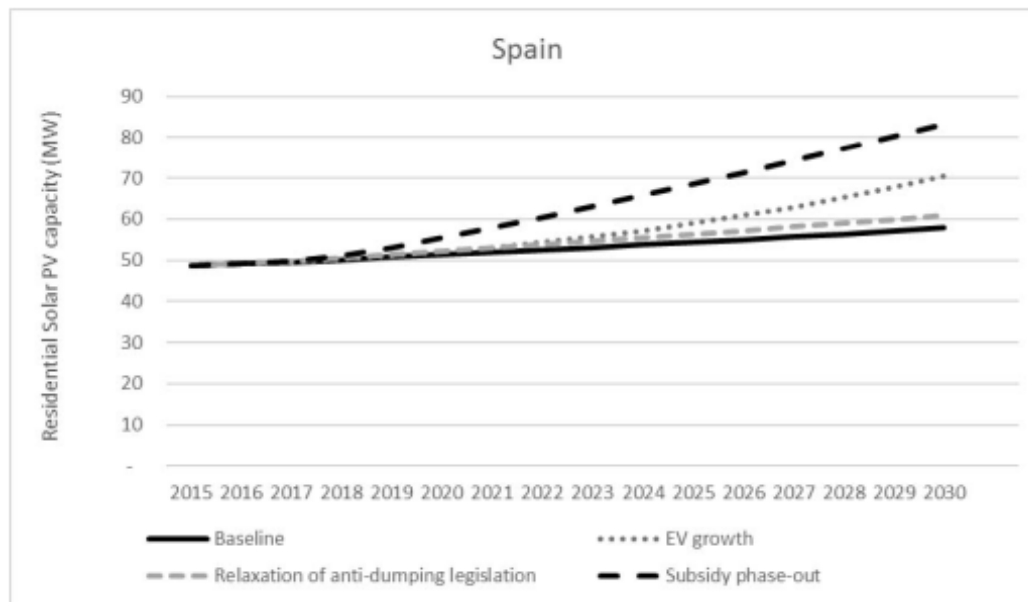
Potential rooftop PV capacity per NUTS2 region (EC JRC 2018)



<http://www.europeanenergyinnovation.eu/Articles/Spring-2018/The-Rooftop-Potential-for-PV-Systems-in-the-European-Union-to-deliver-the-Paris-Agreement>

Potential objectives by Member State

- The potential trajectories given in the EC 2017 study (Milieu) may not be realistic.
- E.g. for Spain only 80 MW despite a residential potential of at least 13 GW



Source: EC 2017 (Milieu)

CE Delft (2016) estimates:

- About 50% of the households produce energy in 2030 (and 83% provide some kind of energy services)
- About 50% of all electricity could be produced by prosumers or prosumer initiatives in 2050 (about 1500 TWh out of 3100 TWh) by 2050.

Further studies on member state level are required

- In addition to PV, community projects can use any kind of RE technology:
 - wind, hydro, biomass, geothermal, incl. heat
- Where is then the limit of prosumer projects when it comes to its share in the energy supply?
 - 10%, 25%, 50%, 75% or even 100%? NL proposes 50% in its draft NECP.
 - Restrictions may be actually one be of financial nature and competition from other actors.



To define appropriate objectives, country-specific studies are required.

Potential indicators to be included in NECPs

- Number of prosumers by prosumer type
 1. Households (in the wording of the governance regulation: “self-consumers and self-generators”),
 2. Energy communities (like cooperatives; maybe include other citizen participations)
 3. Cities and municipalities (public entities)
 4. Companies (commercial entities like SMEs and industry)
 5. Farmers
- Capacity (kW) installed by prosumer type
- Energy fed into the grid (kWh) by prosumer type (ideally electricity and heat)
- Energy self-consumed (kWh) by prosumer type (ideally electricity and heat)
- Battery storage capacity (kWh) installed by prosumer type, incl. EV
- (Thermal storage capacity (kWh) installed by prosumer type)
- Investment (EUR) by prosumer type (if available)

Indicators – other points to be considered

- Ideally agree on the same thresholds when reporting system sizes (e.g. <1 kW, < 3 kW, < 10 kW, <30 kW, < 100 kW, <1 MW, >1 MW); should be independent from prosumer type
- Other, non-prosumer-type owners should be defined as well, e.g. utilities, project developers, investors.
- Separate meters will be required to measure self-consumed energy (REDII Art. 7.2)
- Mind that REDII only considers electricity under the definition of self-consumers – but in the Governance Regulation uses in its objectives and trajectories the term “energy” (i.e. potentially incl. heat).
So ideally governments consider also heat from prosumers in their NECPs.

Recommendations

- Request or commission studies by Member State on uptake scenarios for prosumers and energy communities until 2030 and beyond
- Ideally use comparable methodology to calculate technical potentials (especially regarding roof-top PV)
- Mind that the share of capacity of prosumer projects could be very high
- Work on common definition of prosumer types
- Member States should record prosumer types with each installation for statistics



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Further work on NECPs and next steps

- The PROSEU team will be gathering information on the NECP processes in the MSs and review the drafts
- We plan to assess prosumer aspects in NECPs in 2019-2020
- We will continue to work on prosumer-related national policies in 2019 and 2020
- We would be glad to continue discussing prosumer aspects with all stakeholders.



Thanks for your attention! Any questions?

For more information:

Marta Toporek, Client Earth, Mtoporek@clientearth.org, +32 (0) 2808 3469

Kristian Petrick, eco-union, kristian.petrick@ecounion.eu; +34
637710451

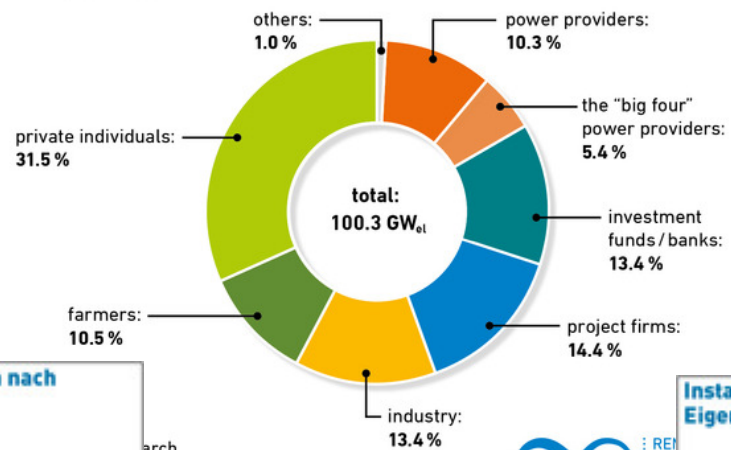
info@proseu.eu | www.proseu.eu



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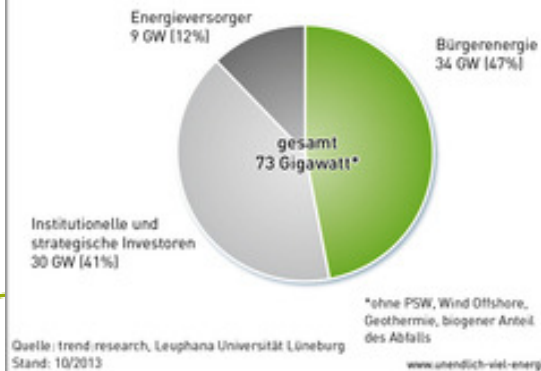
Example of reports in Germany (Renewable Energies Agency)

Renewable energy in the hands of the people
Ownership distribution of installed RE capacity for power production in Germany in 2016



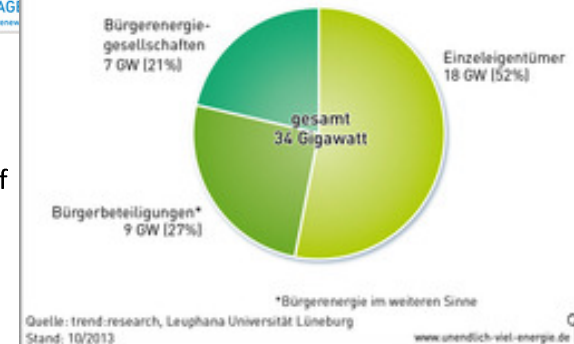
<https://www.unendlich-viel-energie.de/features/good-reasons/2-more-public-participation>

Installierte Leistung Erneuerbarer Energien nach Eigentümergruppen in Deutschland 2012



<https://www.unendlich-viel-energie.de/themen/wirtschaft/wertschoepfung/buerger-sind-treiber-der-energiewende>

Installierte Leistung Bürgerenergie nach Eigentümergruppen in Deutschland 2012



Electricity market directive

- Electricity market directive, Recital 29, p. 32:
- Consumers should be able to consume, store and/or sell self-generated electricity to the market. New technology developments will facilitate these activities in the future. However, legal and commercial barriers exist including for example disproportionate fees for internally consumed electricity, obligations to feed self-generated electricity to the energy system, administrative burdens such as for self-generators who sell electricity to the system to comply with the requirements for suppliers, etc. All these obstacles that prevent consumers from self-generating and from consuming, storing or selling self-generated electricity to the market should be removed while it should be ensured that self-generating consumers contribute adequately to system costs