FACTSHEET Self-generation of renewable electricity

Why renewables?

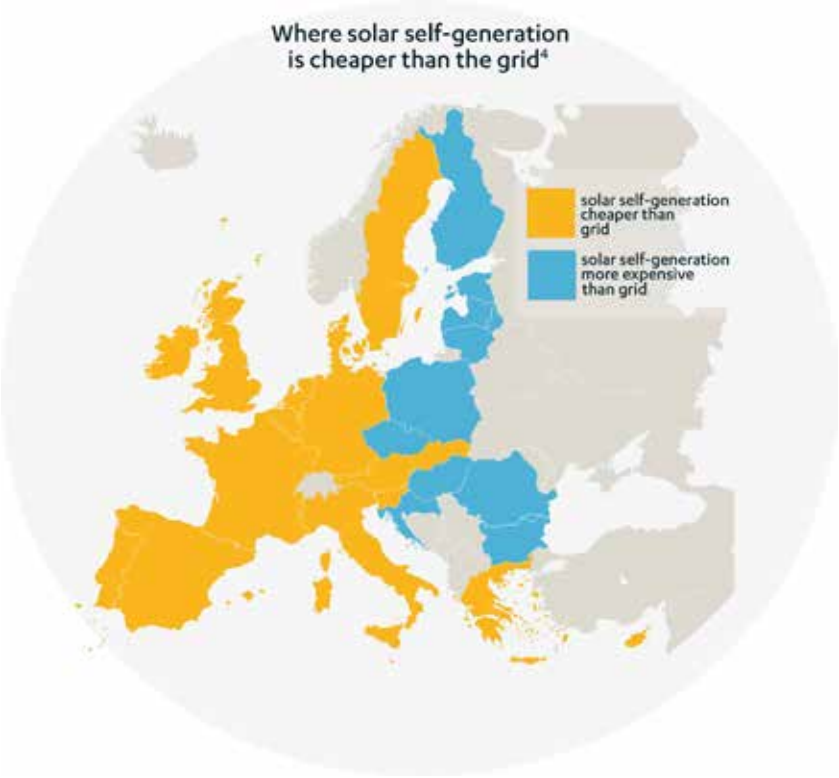
The planet faces the prospect of dramatic global warming without urgent action to curb carbon emissions. The Paris agreement of 2015, where countries from all continents have committed to cutting their emissions, will require a move away from conventional, high-emitting sources of energy, like coal, to clean sources like solar or wind power. The EU has committed to 27% of its energy consumption coming from renewable sources by 2030 and is hoping consumers can play a part in this energy transition.

Against a backdrop of rising energy prices, many consumers have spotted the potential of renewable energy to lower their bills and reduce their dependence on large energy companies. In some countries, energy bills account for as much as 16% of average household expenditure[1].

What can consumers do to contribute?

A European Commission survey found that, by 2013, 5% of Europeans had already put in place a renewable energy installation at home[2]. That share is very likely to have increased since.

If the EU creates welcoming conditions for consumers in self-generation, it would mean that a larger share of electricity on the grid could be from renewable sources, requiring less energy from dirtier sources to be produced. The potential for more consumers to produce electricity is there: for 80% of households in the EU, it would be cheaper to produce electricity from solar panels than to buy electricity from the grid (see map). A recent report even estimates that, with the right policies in place, as many as 113 million households could be energy-producing by 2050[3].



What does more renewable energy mean for the grid?

Clearly, more renewable energy production will mean changes for the grid. The conventional way for the grid to operate is for energy to be produced by power plants, distributed through the grid to end-users and consumed by households or businesses. Traditionally, this has meant that consumer households tended only to receive electricity and not upload any to the grid. This has been changing in the last few years as more renewable energy installations are put online.

[1] European Commission, Energy prices and costs in Europe (2014), see Slovakia (2014) in graph on page 10.
[2] European Commission, Special Eurobarometer 409. Climate Change, March 2014, page 37.
[3] CE Delft, The potential of energy citizens in the European Union, 2016.
[4] Joint Research Centre of the European Commission, Cost Maps for Unsubsidised Photovoltaic Electricity (2014).

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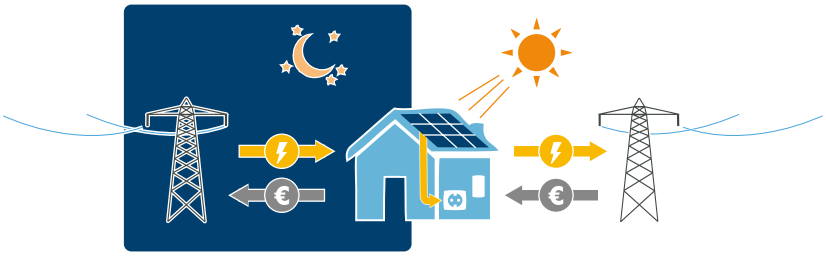
But, as this number of installations increases, grid operators will need to make sure the grid can absorb the upload. Huge centralised power plants should not cause congestion on the grid and prevent electricity from consumer installations from reaching the grid.

Renewable self-generation: consumers as buyers & producers [5]



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What are the barriers consumers face?

Today consumers face a number of hurdles when it comes to producing, connecting and selling their electricity to the grid. As a result the number of consumers choosing to invest in the production of electricity from renewable sources could be far higher. While electricity production from solar energy is booming in China, in the US and many other countries, the EU is the only world region where consumer investment in solar panels has decreased massively over the last four years[6].

Generally, the legal framework varies from country to country but it shares one common trait: policies for solar energy and financial support schemes keep changing. This makes it very difficult for consumers to make long-term estimations about when and how quickly they might pay off their investment when they install their solar panels.

Consumers also find the process of getting connected to the grid to sell their excess electricity complex and time-consuming. Fair market access for consumers who produce renewable electricity is urgently needed. Tenants living in multi-storey dwellings should also be able to access electricity from solar energy: self-generation of electricity should not be something limited to detached house-owners.

BEUC recommendations

Given the necessity of urgent action to tackle climate change and the role that consumers could play in this energy transition, BEUC recommends the EU to make several things happen:

1. The EU should require Member States to put in place a dedicated long-term strategy with simplified rules for consumers who want to use renewable energy at home to avoid constantly changing policies.
2. The economic viability of consumer projects to produce electricity from solar energy depends on the possibility of selling excess electricity to the grid. Therefore, the EU should grant consumers priority access to the grid.
3. Consumers need to have a reliable remuneration scheme for excess electricity they sell to the grid. As long as wholesale energy markets are distorted, the EU should encourage Member States to put support schemes in place for electricity produced from renewable sources.

[5] BEUC position paper, A welcome culture for solar self-generation, page 4.
[6] Eurobserver Barometer, Photovoltaic barometer, 2016.