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Prosumers in Germany

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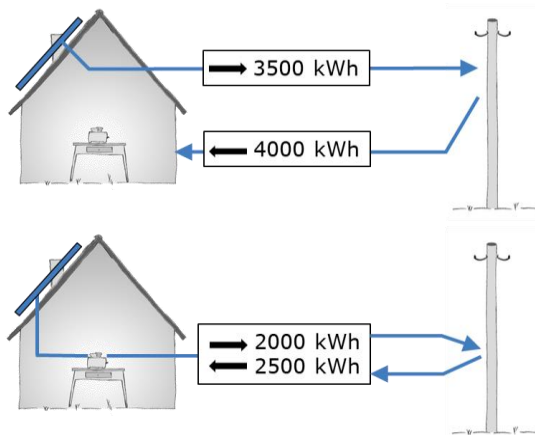


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Electricity produced by prosumers is relevant:

- More than two million PV systems have already been installed. About one million of those are being used for self-consumption and more than 220.000 electricity storage units exist.
- At times (e.g. noon time in summer), more than 25 % of total electricity consumption is generated by PV systems that are connected to the low voltage grid.

Prosumers in Germany usually choose between two options:



1. Full feed-in (no self-consumption)

2. Self-consumption in combination with feeding surplus electricity into the grid

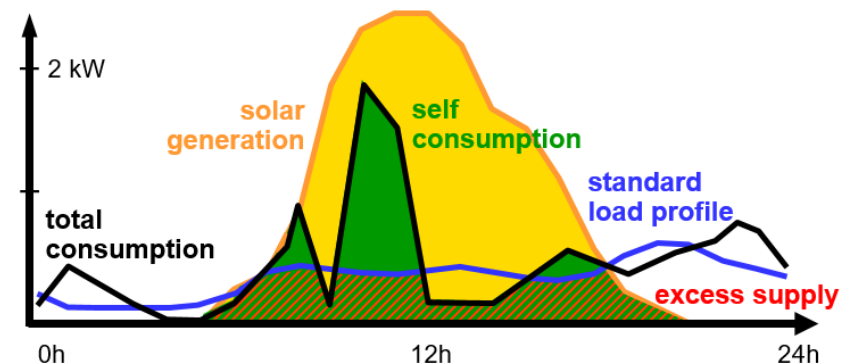
Prosumers are not fully integrated into the electricity market:

- Consumption and generation are usually not measured on a quarter-hourly basis.
- The supply of electricity taken from the grid is provided by using a standard load profile.



Partial integration of prosumers into the electricity market leads to unintended effects:

- Prosumers who consume self-produced electricity are simultaneously supplied by their suppliers, leading to excess supply in the system.
- Insufficient electricity balancing can result in network security risks.
- Prosumers cannot react to price volatility, actively participate on wholesale markets, or provide flexibilities.



Active participation of prosumers in the electricity market requires the assumption of responsibility:

- Electricity fed into the grid as well as electricity drawn from the grid must be measured on a quarter-hourly basis.
- No application of standard load profiles in combination with self-consumption.



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