



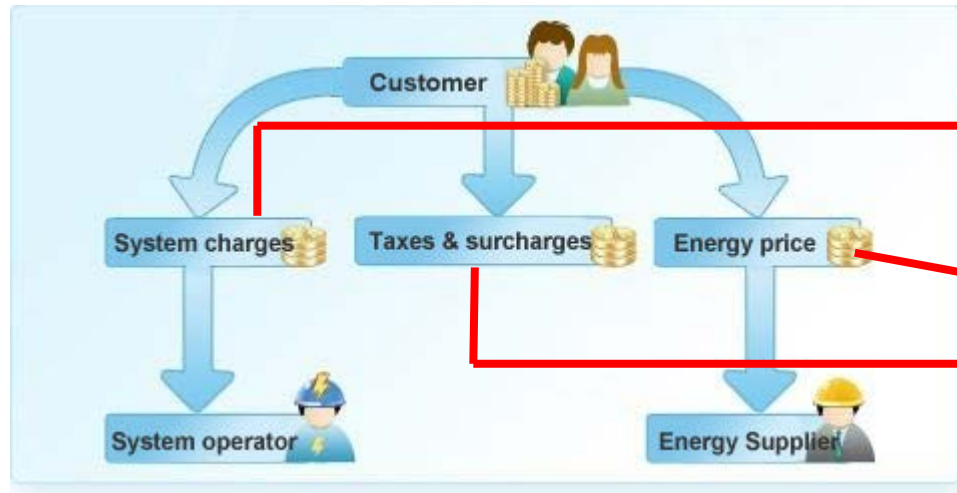
Incentives and challenges in promoting self-consumption – case study Austria

- Electricity price in Austria
- What is self-consumption
- Net-metering
- „gemeinschaftliche Erzeugungsanlage“ – collective generation plant

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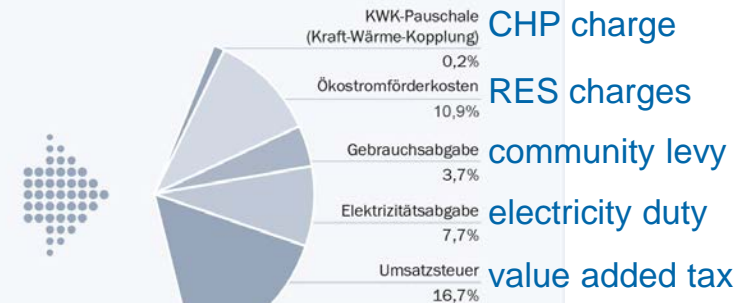
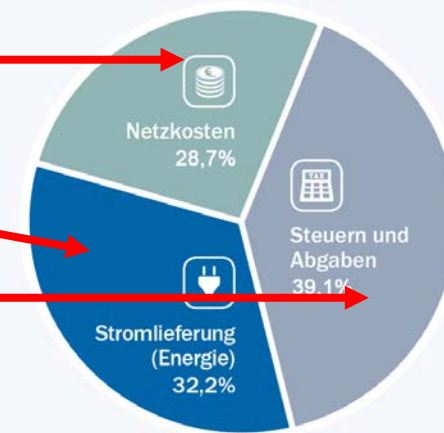
based on consumption and load

based on consumption



ZUSAMMENSETZUNG STROMPREIS

HAUSHALT MIT JAHRESVERBRAUCH VON 3.500 KILOWATTSTUNDEN STROM, WIEN



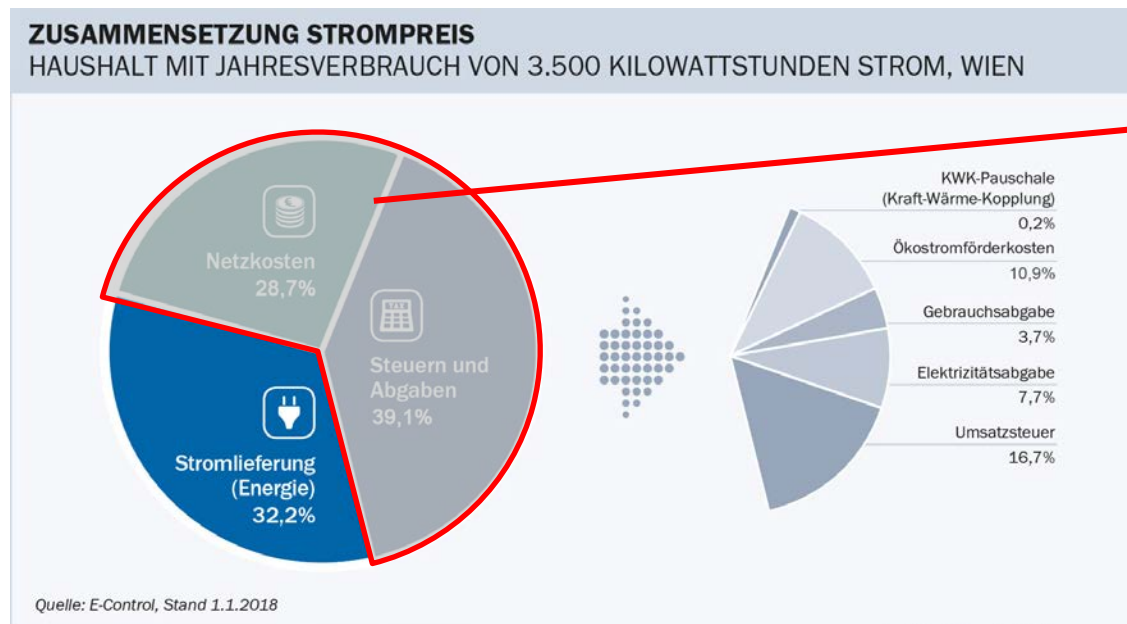
Quelle: E-Control, Stand 1.1.2018

- In general 1,5 Cent/kWh
- For self-consumed electricity
- The prosumer is responsible himself for paying the duty
- Free for up to 5.000 kWh for self produced and consumed electricity
- Free for up to 25.000 kWh for self produced and consumed renewable electricity

- Electricity price in Austria
- **What is self-consumption**
- Net-metering
- „gemeinschaftliche Erzeugungsanlage“ – collective generation plant

- On-site production and consumption
- Without using the public grid
 - best example - alpine huts stand-alone power system
 - Companies with on-site power plants
- Austria – self-consumption
 - no network charges or connected charges (green electricity surcharge)
 - It's not exempted BUT the system is built on “electricity taken from the grid”
 - Electricity duty – electricity consumed
 - Up to 5.000 kWh no fees
 - For renewable electricity up to 25.000 kWh

- There is no direct support for self-consumption in Austria
- Profitable via price difference
- Electricity take from the grid costs around 20 Cent/kWh for households



You save at least this share via selfconsumption

- Self-consumption isn't uncommon on a larger scale
- Somehow „new“ for smaller installations
- Check what consumed electricity contributes to the system
 - How are network charges designed
 - How are additional charges designed
 - Electricity consumed or electricity taken from the public grid
- The less charges on self consumed electricity the more attractive self-consumption is
 - Less quantity (if based on electricity taken from the grid) to base grid tariffs on ?!
 - “Energy efficiency effect” – less electricity used due to energy efficiency

- Tarif-system tending towards a more load-based mechanism
 - Costs-by-cause principle
 - distribution networks are designed for peak load demand
 - Maybe in the future also “peak load supply” (via decentralized production) ?! – there are no indications for this right now
 - For households
 - Incentive for smart meters to meter load vs. fixed load profile
 - Self-consumption plus storage getting more and more attractive

- Electricity price in Austria
- What is self-consumption
- **Net-metering**
- „gemeinschaftliche Erzeugungsanlage“ – collective generation plant

- Key factors
 - On site production, consumption and excess electricity is supplied to the grid
 - Metering system
 - Time frame
- Old (analogue) electricity meters can spin backwards
- Thereby the electricity consumed and supplied to the grid are netted
- Charges commonly are calculated based on load and electricity consumed (taken from the public grid)
- Thereby it's an extra benefit besides taking less electricity from the grid for the local producer
- Net metering isn't favoured because of the distortions it causes

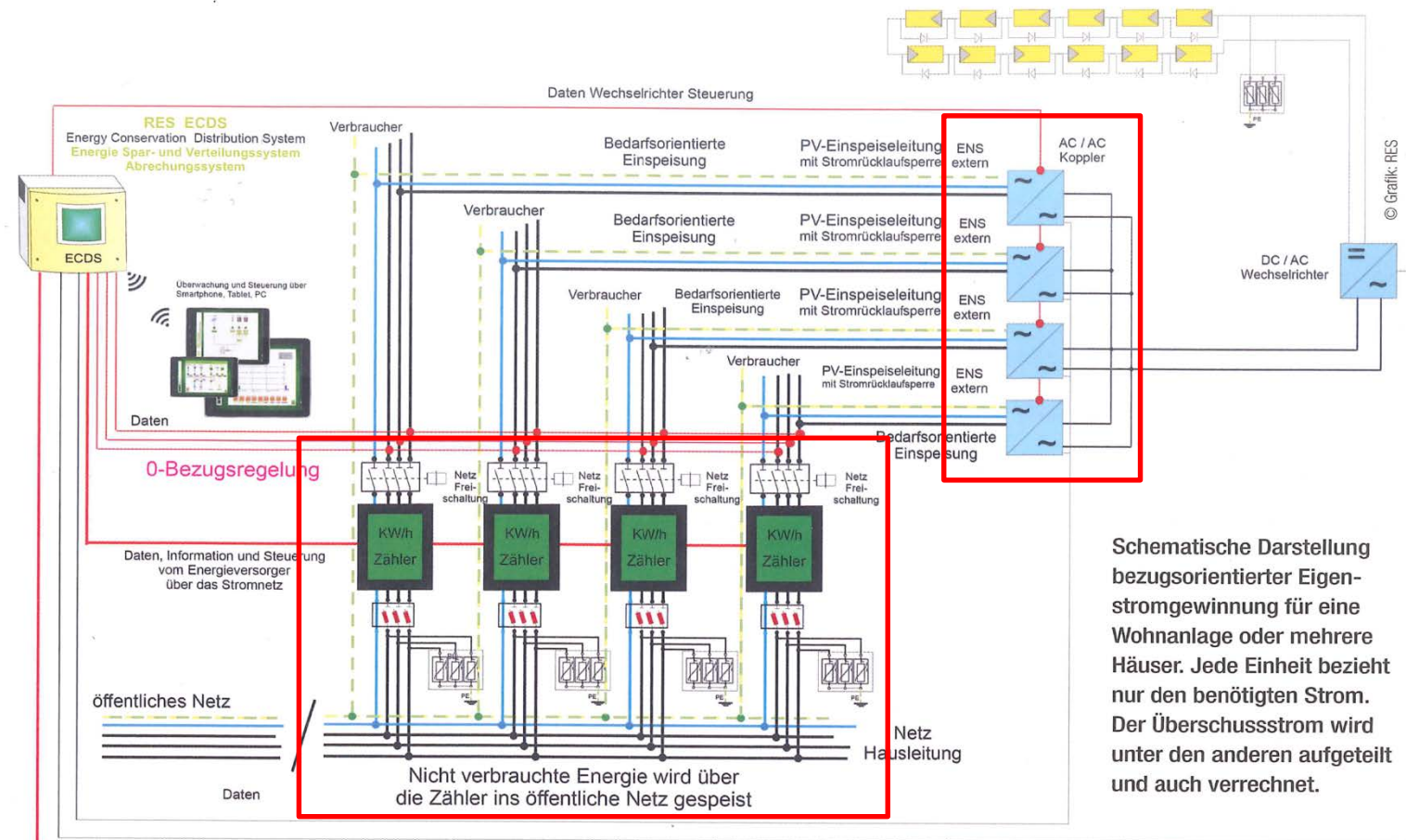
- Net metering should be avoided as **it implies that system storage capacity is available for free**
- **It reduces consumers' timevalue sensitivity** to volatile energy prices and hence undermines efforts to enhance flexibility and to develop a wider demand-side response with consumers playing a more active market role

<https://www.ceer.eu/documents/104400/-/-/3f246c2a-d417-2a29-d8eb-765bd6579581>

- Electricity price in Austria
- What is self-consumption
- Net-metering
- „gemeinschaftliche Erzeugungsanlage“ – collective generation plant

- Local energy production and consumption on a smaller scale (compared to big companies which already have had their own on site power plants) is just developing
 - Renewable energy directive - renewable Energy Communities
- Unclear situation on apartment buildings or buildings used by various entities
 - Tenancy law (Mietrechtsgesetz), Condominium act (Wohnungseigentumsgesetz)
- To enable the collective usage of locally produced electricity some amendments were made in Austria

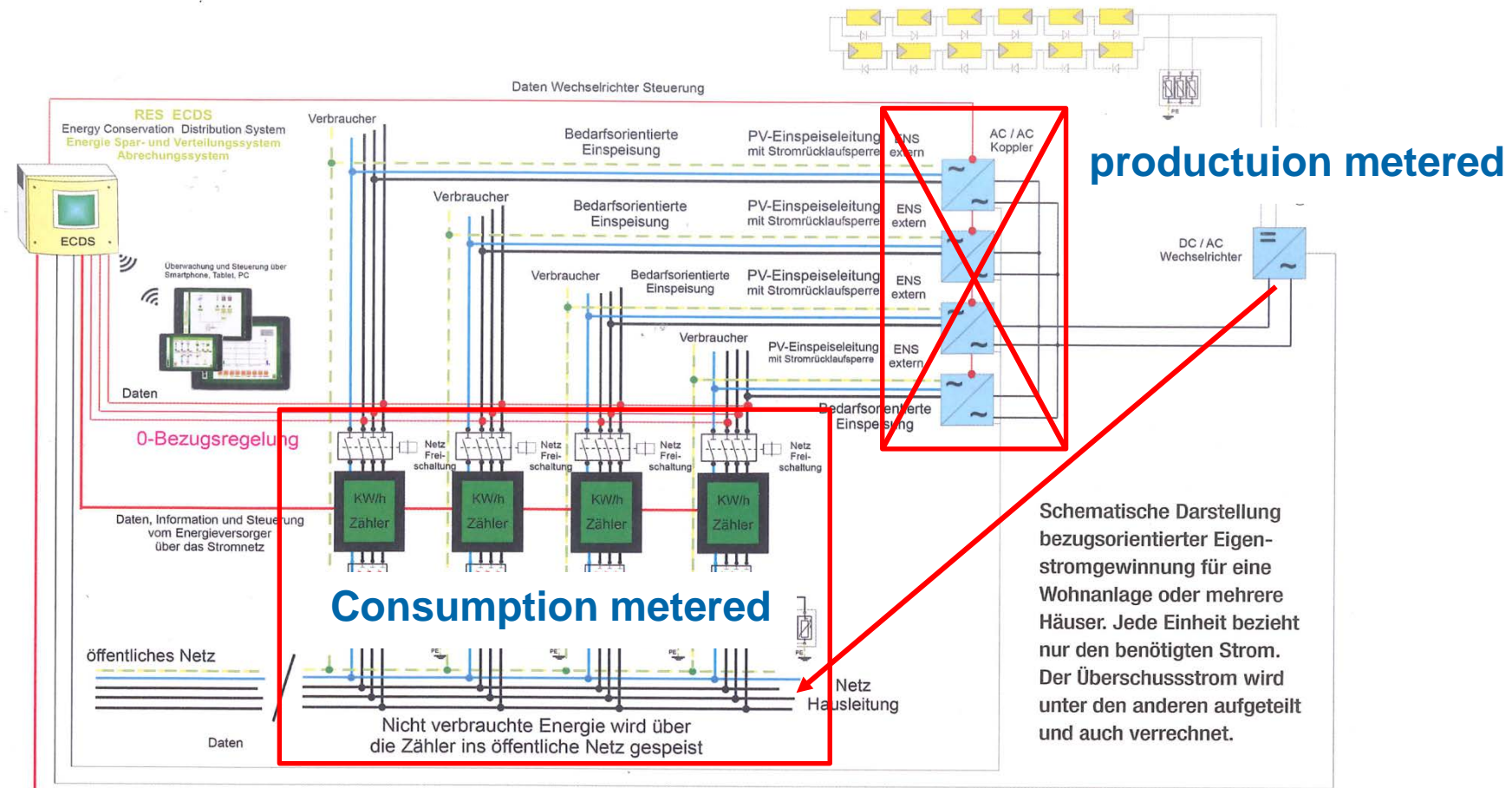
Situation as it was – not profitable



[source: „Mehr Sonnenstrom für mich – optimierter Eigenstromverbrauch“ Gemeinschaftliche Broschüre KL.IEN / PV-Austria]

- The power plant can be connected to the main cable
 - No separate power inverter per flat needed
- Based on a fixed or variable allocation profile the produced electricity is „allocated“ on a 15min basis to the participants
 - One can only allocate as much produced electricity to the participant as he has consumed in the 15min timespan
 - An intelligent metering system is a prerequisite
- The DSO is responsible for the allocation (based on the provided allocation profile)
- Excess electricity is fed into the public grid and there has to be an existing purchase agreement with a supplier

Situation as it is – more likely to be profitable



[source: „Mehr Sonnenstrom für mich – optimierter Eigenstromverbrauch“ Gemeinschaftliche Broschüre KL.IEN / PV-Austria]

Unsere Energie gehört der Zukunft.

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