PV Direct Consumption in Germany

- Its commplicated





German Solar Association May 29, 2019

Bundesverband Solarwirtschaft e.V. (BSW-Solar)

German Solar Association: Who we are





HEADQUARTERS Berlin, Germany

Basic photovoltaic structure -Funding policy framework and market segments



Regulatory framework Market segments PV



Overview of marketing opportunities for PV system operators



self-sufficiency

local consumption of electricity by the same natural or legal person who operates the installation. direct delivery

Supply to a customer other than the operator of the installation via a direct line on site. direct marketing

Feeding into the network of general supply and supply to a customer who is not the plant operator (direct marketer, electricity trader, customer).

Statutory market premium

Direct consumption concepts -The Standard Model





Own consumption concepts -The owner-operator model





Direct consumption concepts -The roof lease model





Direct consumption concepts -The Investor Model





Framework for collective self-consumption in Germany



Basic distinction collective self-consumption Support for collective selfconsumption by premium Other models of collective self-(Mieterstrom acc. to EEG) consumption Introduced in July 2017 Building owners and tenants are \bigcirc 0 free to sign contract according to Includes certain criteria in order general terms of service to be eligible Also pricing can be agreed upon Each kWh which is produced by \bigcirc with no restrictions PV and consumed locally is rewarded with a premium A separate contract for the supply \bigcirc with PV electricity is possible Amount of premium is deducted \bigcirc from FiT level acc. to EEG There is no benefit, however some levies might be reduced

Preconditions for support by German Mieterstrom law (Renewable Energy act) I



Criteria plant size

PV system size must not exceed 100 kWp

Criteria for buildings

Building has to mainly serve housing and accommodation

At least 40% of the building space has to be used for living

Criteria usage of grid

PV Electricity has to be delivered without usage of public grid

Criteria regarding self consumer

PV electricity has to be delivered to end customers only

Only one contractor for all electricity supply is required (PV and from the public grid)

PV electricity has to be consumed inside the building or nearby annex

PV electricity delivered has to be billed separately for each participating consumer

Preconditions for support by German Mieterstrom law (Renewable Energy act EEG) II





Tenant electricity projects up to 100kW are legally subsidised with a surcharge, but face levies



- Prerequisite: At least 40% of the building area must be used for residential purposes
- The direct subsidy is roughly equivalent to the 40% EEG levy for selfsufficiency.
- Deduction of a uniform amount from the underlying PV remuneration rate
- Direct funding = value to be invested 8.5 cents; the larger the plant, the lower the funding

performance class	PV feed-in tariffs (as of August 2018)	tenant flow surcharge
up to 10kW	12.08 ct/kWh	3.58 ct/kWh
Over 10 kW to 40 kW	11.74 ct/kWh	3.24 ct/kWh
Over 40 to 100 kW	10,50 ct/kWh	2,00 ct/kWh

Experience of current support scheme for collective self-consumption in Germany



• So far market development has been rather slow and on a low level



- It appears that amount of benefit does not cover costs for implementing in an economical viable way
- Further **restrictions are high**, acting as a barrier for implementation
- The German government is still evaluating the law and will publish their assessment at the end of **September 2019**

Innovative tenant electricity models could drive the urban energy system transformation





 Citizen participation and increasing acceptance for energy system transformation

_{CO2 savings of} up to 500,000 tonnes per year through RES-E

- Social policy effects due to lower ancillary costs for tenants
- Landlords can increase the attractiveness of properties
- Sector tying is favoured
- Digitisation in the energy sector to be strengthened

BUT: There are currently major obstacles to the development



Obstacles and barriers



- Unclear legal definitions reduce planning reliability and prevent innovative supply solutions
- Technical-administrative effort increases project costs
- Limitation of annual add-on to 500MW increases project risk

Why is it still worth persuing tenant supply?



- In the area of solar tenant power supply, there is enormous potential for photovoltaics, which must be mobilised to implement climate protection targets.
- The participation of tenants not only as payers of the energy system transformation, but also as direct beneficiaries is important for the acceptance of the project.
- Tenant power projects offer equally interesting business models for the old and new energy industry.
- In contrast to some "efficiency investments", tenant flow offers often meet with equally high interest from tenants and the housing industry.
- The complexity of the business model and the many existing barriers to market entry do not make "tenant power projects" a self-runner.
- A concerted approach by many stakeholders at federal and state level is necessary to open up new markets.



Room for improvement: Proposals to reform German Landlord-to-tenant supply premium



Regarding current Mieterstrom framework

- Increase level of premium payments in order to ensure economic feasibility
- Increase size of eligible PV systems up to at least 250kWp
- Reduce requirements for metering and billing the delivered PV electricity
- Remove capped electricity price (contracting parties should be free to agree upon price levels themselves)
- Increase scope of supply radius and remove barriers for the supply of neighboring buildings
- Expand support scheme to commercial buildings



New framework for local self-consumption needed



In general improve framework for local self-consumption by

- Fully removing non energy related surcharges including payments for the RES surcharge
- Treating individual and collective self-consumption equal and
- Enabling non discriminatory Peer2Peer trading of distributed PV electricity



Thank you for your attention...

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Source: Solarmark