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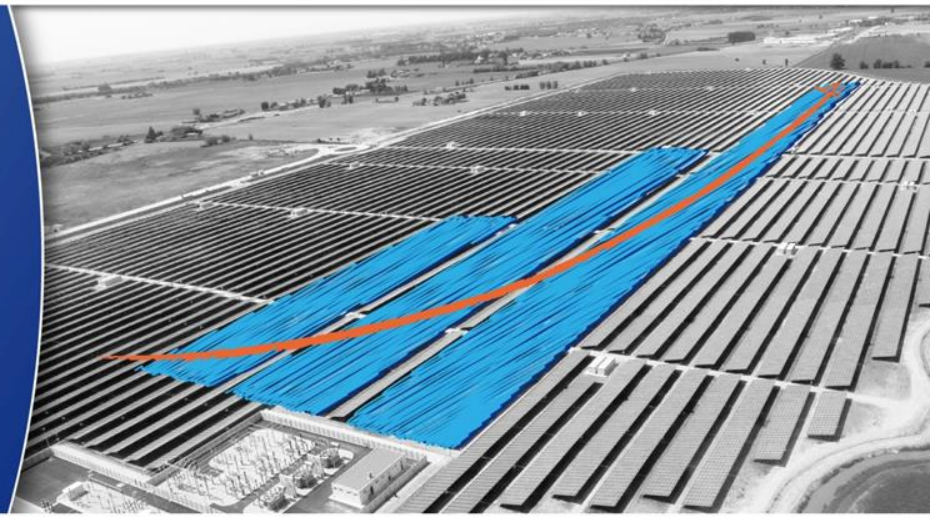
The neighbor solar supply model in Germany - “Mieterstrom”



Luz Aguilar – BSW-Solar

Brussels, 18th October 2016

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German Solar Association

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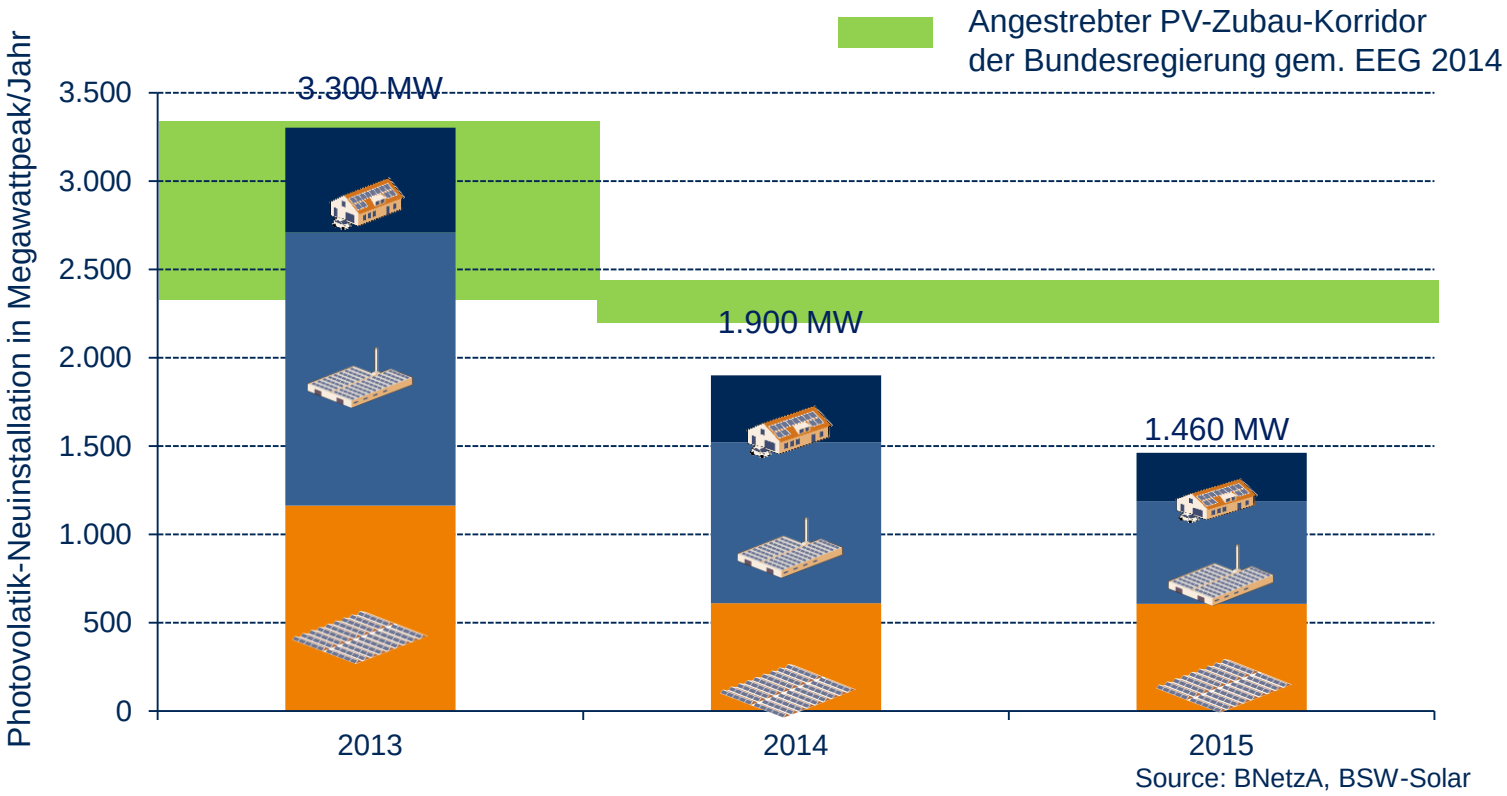
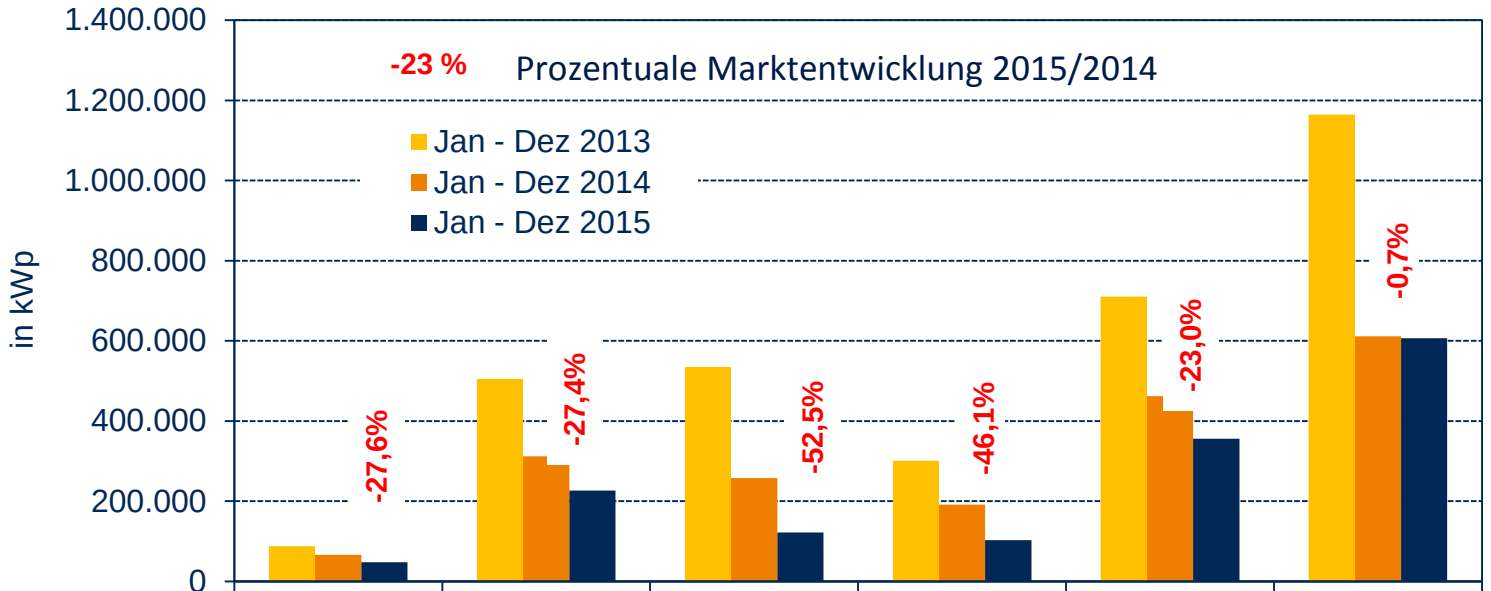
TASK	To represent the solar industry in Germany in the thermal and photovoltaic and storage sector
VISION	A sustainable global energy supply provided by solar (renewable) energy
ACTIVITIES	Lobbying, political advice, public relations, market observation, standardization
EXPERIENCE	Active in the solar energy sector for over 30 years
REPRESENTS	More than 800 solar producers, suppliers, wholesalers, installers and other companies active in the solar business from all over the world
HEADQUARTERS	Berlin

PV development in Germany



Source: BNetzA, BSW-Solar

PV development in Germany



	0-5 kWp	>5-10 kWp	>10-40 kWp	>40-100 kWp	>100-1.000 kWp	>1.000 kWp
Jan - Dez 2013	88.061	505.156	534.393	301.169	710.587	1.164.443
Jan - Dez 2014	66.005	311.677	257.546	191.075	461.955	610.966
Jan - Dez 2015	47.789	226.194	122.352	103.069	355.914	606.649

Source: BSW-Solar, BNetzA; Stand 1/2016

Definition of “Mieterstrom“

- **The neighbor solar supply model** is a **decentralized / locally generated** electricity from PV plants (and/or CHP), which is used directly by the tenants in multi-family houses or commercial buildings.

- The direct supply is allowed by the German Renewable Energy Act (EEG) fulfilling the following criteria:
  - Delivery to a third party (NO person identity)
  - Close proximity to the area
  - Without using the grid

EEG surcharge & changes with the EEG amendment 2017

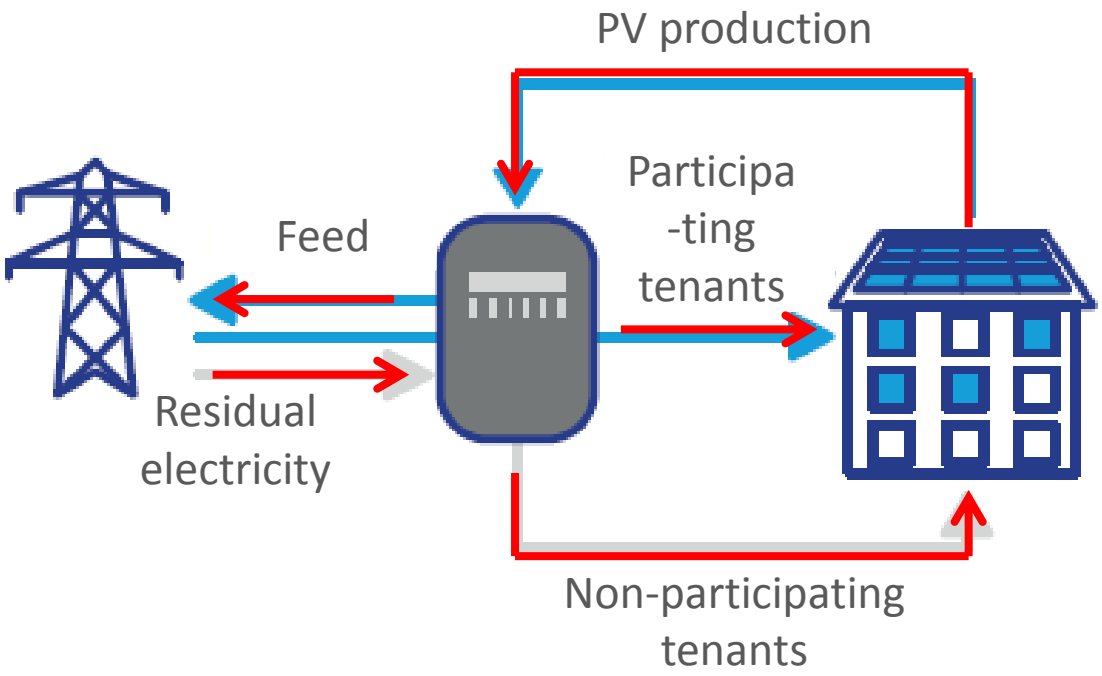
- Currently: payment of full EEG-surcharge 6.354 ct. /kWh

- EEG amendment 2017: the federal government is authorized, through leg[illegible] the Federal Council (Bu[illegible] hat operators of solar instal[illegible]
  a) the sc[illegible]tial building;
  b) the electricity is delivered to a third party for its use within the building

To be defined in autumn 2016

* A distinction can be made between different installation sizes or users

The neighbor supply model



Actors & roles

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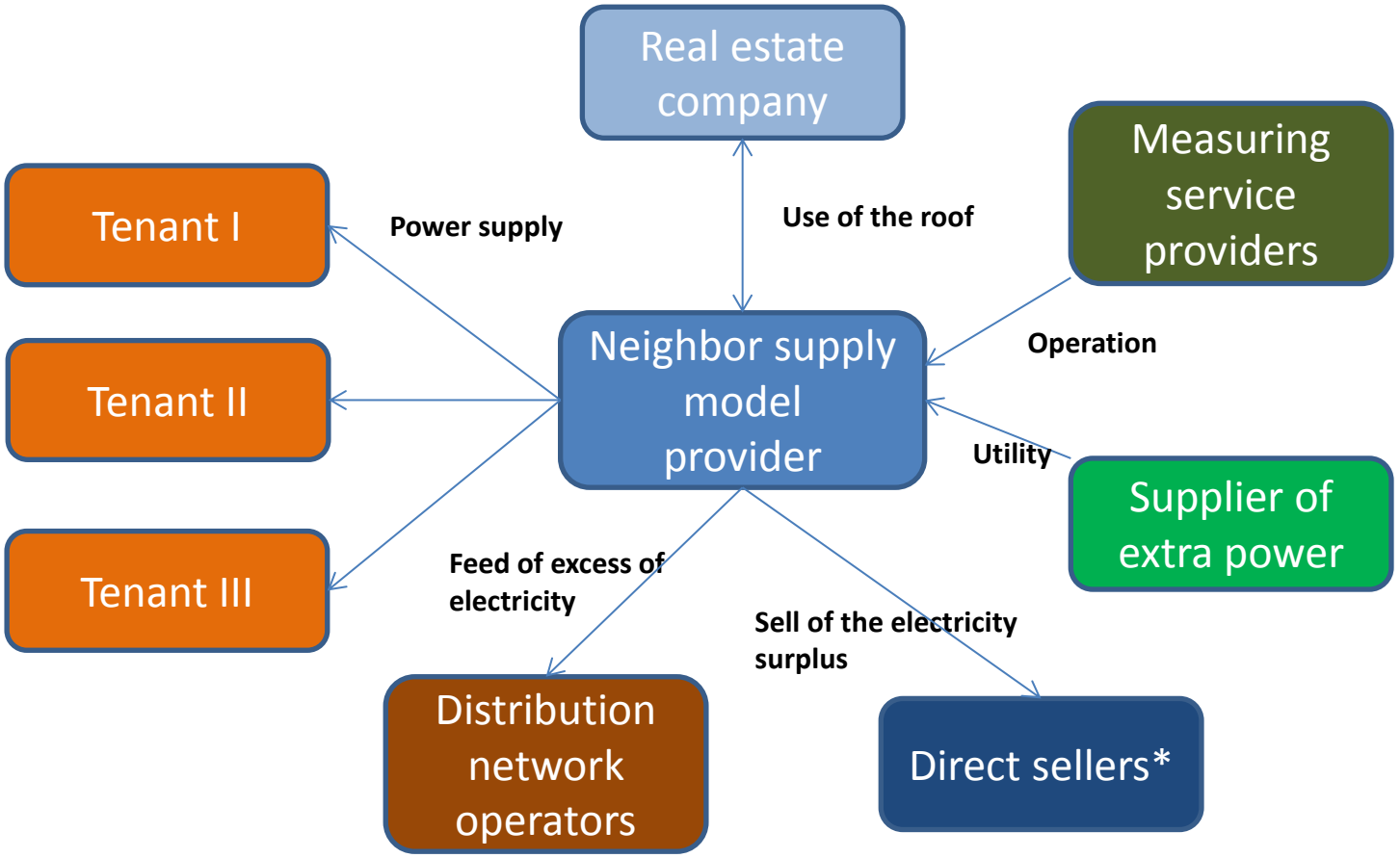
Stages	Tasks	Possible players
Building envelope	Provision of the surfaces for PV generation	**Real estate companies**
Electricity generation	Planning, installation, financing, M&O of the PV installation	**Utilities, service providers, real estate companies**
Electricity delivery	Metering point operation, billing, marketing and customer acquisition, purchasing and delivery of grid power, customer service	**Utilities, cooperatives, real estate companies that are supported in this regard by various service providers, e.g. for measuring point operation and billing**
Electricity consumption	Close of a electricity contract, electricity consumption	**Private or commercial final consumers (= tenants)**

Contractual relationships of the players



*Direct markers (from 2016 > 100 kW)

Principal players

Real estate sector players:

1. The cooperative real estate
2. The municipal real estate
3. The commercial real estate
4. Homeowners' associations

Energy sector players:

1. Public utilities and energy supply companies
2. Green electricity providers
3. Energy cooperatives

Market potential

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- Potential users of the neighbor supply model are:
  - Private tenants in multi-family houses
  - Real State Companies
  - Commercial tenants
  - Dormitories

- Number of multi-family houses: approximately 21 million apartments; About 3 to 4 million of these (up to 20 percent) are eligible for the supply model.*
- If the potential is fully exploited, consumption of approx. 3 TWh.
- Participating households can usually cover 25 to 35 percent of their own electricity requirements via the PV system.

*Estimations of BSW-Solar

Impact on the EEG surcharge

- Tenant electricity relieves EEG levy: ~5.7 Cent /kWh
  - Non-feeding of PV electricity avoids compensation payments
  - Positive effect despite reduced EEG levy on tenant electricity:

- Net effect: **~ 100 million euros relief** (assuming 40% payment of the EEG surcharge)

*Estimations of BSW-Solar

POSSIBLE CHALLENGES

Initial situation: Request for the model realization for several multi-family houses

Source: SW Stuttgart, Dr. Jochen Link

The crossing of the public street couldn't be realized for economic reasons

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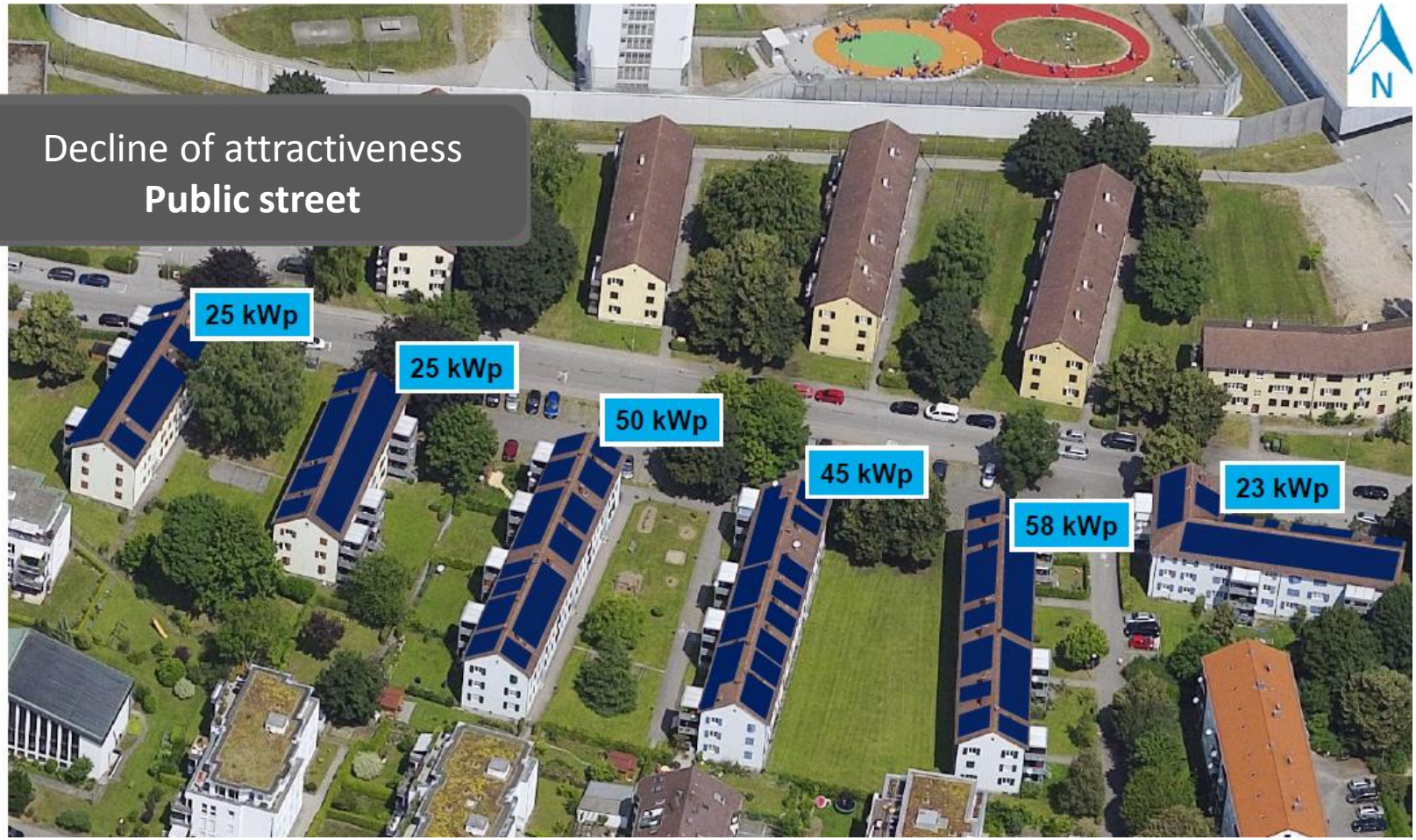

Source: SW Stuttgart, Dr. Jochen Link

In practice a customer installation is restricted to a single building or 100 customers

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Source: SW Stuttgart, Dr. Jochen Link

The meters are located at opposite ends of the building, resulting in a division of the building

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Decline of attractiveness
Public street

Decline of attractiveness
Customer facilities

Decline of attractiveness
Technical conditions

Source: SW Stuttgart, Dr. Jochen Link

Through the installation of metering systems for each part of the building it´s no longer economically viable

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Source: SW Stuttgart, Dr. Jochen Link

Important assumptions for the implementation of the amendment

- The EEG surcharge for “Mieterstrom” and self-consumption should be equated to 40% from 2017 onwards
- Guaranteed price advantage against the normal supply rate
- The local consumption of the generated electricity should be at least 20% p.a. & Object
- Maximum size of the PV system can be limited to 100 kWp
- Neighborhood concepts should not be excluded
- The administrative processes (registration) should be easier

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BEST PRACTICE EXAMPLE

Energy cooperatives

Heidelberger Energiegenossenschaft eG:

First cooperatively organized provider

- 7 PV installations with total capacity of 445 kWp
- Supply with PV electricity to 119 tenants
- From the energy sector the housing cooperative was supported by service providers like Bürgerwerken, Naturstrom, and Discovergy.

Thank you for your attention

Luz Alicia Aguilar

International Project Manager

German Solar Association

aguilar@bsw-solar.de