Federal Ministry
for Economic Affairs
and Energy

Photovoltaics in urban areas – legal framework

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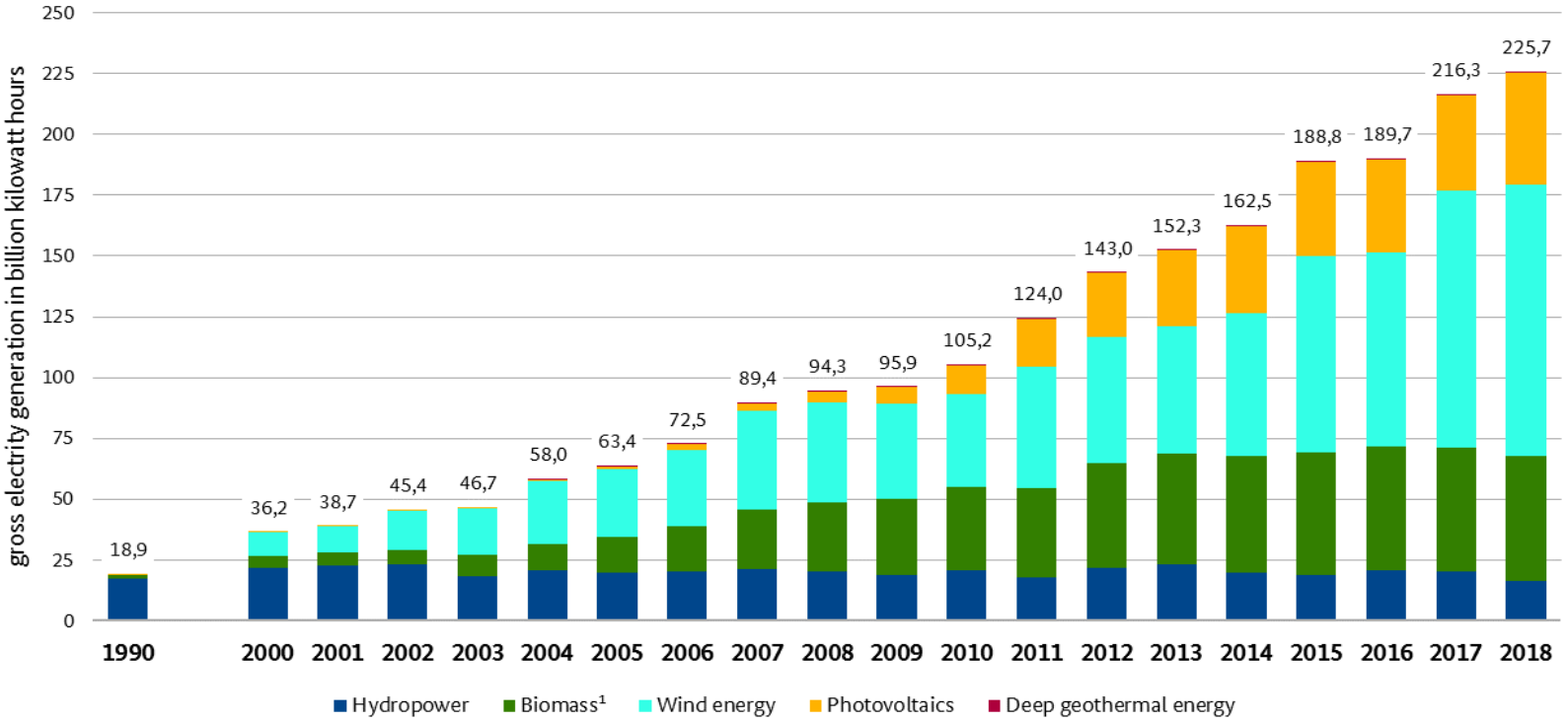
Paris, 2018 May 23

Agenda

- Development of RE, especially of PV
- Legal framework
- Development of prices
- Status quo self-consumption in Germany
- Scheme Landlord-to-tenant electricity supply
- Summary

Annual Installed Capacity RE
Renumeration by the EEG-levy: 6,4 ct/kWh (23 billion Euro in total in 2018)

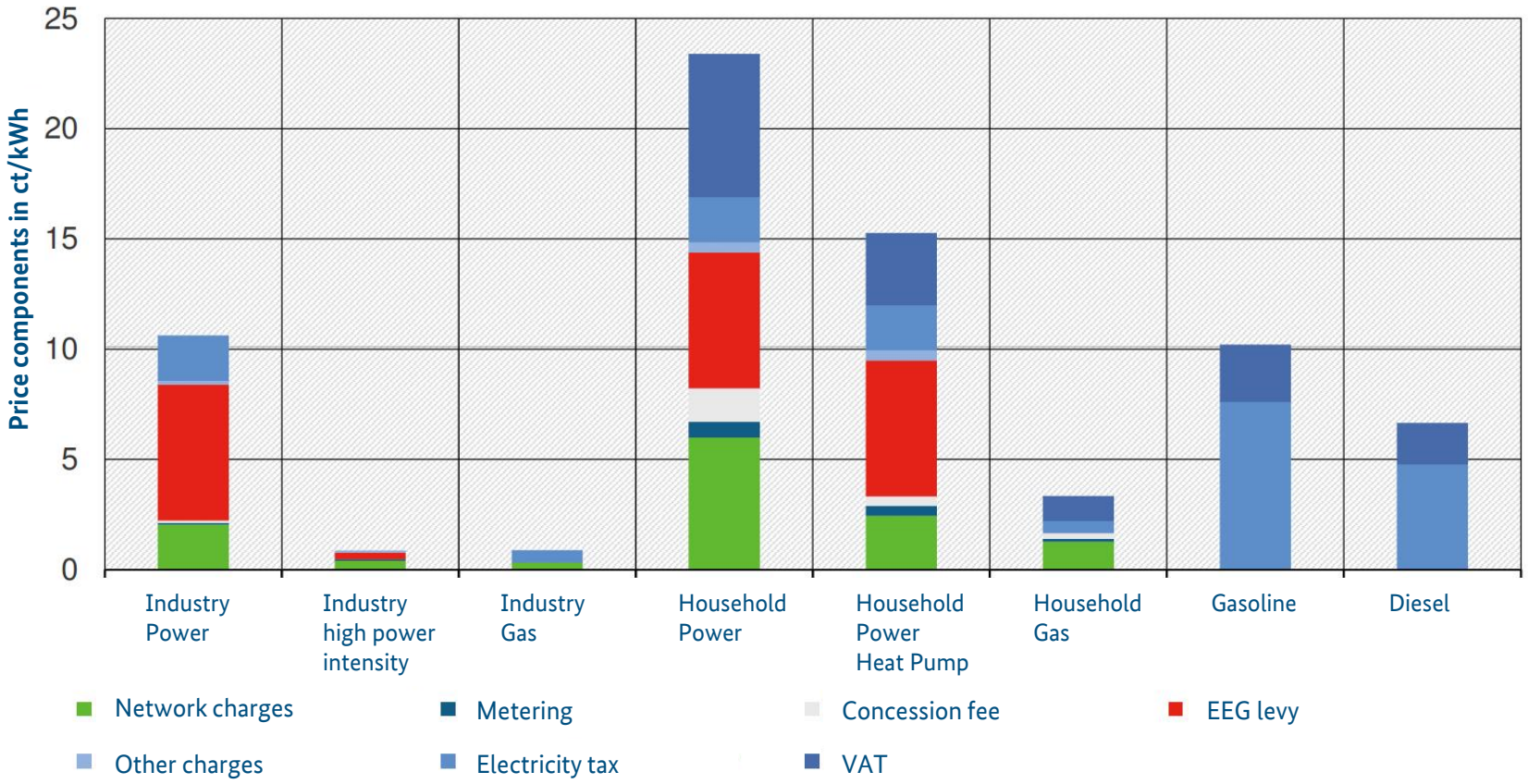
Development of renewables-based electricity generation in Germany



¹ incl. solid, liquid and gaseous biomass, sewage sludge and the biologic fraction of waste

BMWi based on Working Group on Renewable Energy-Statistics (AGEE-Stat); as of February 2019; all figures provisional

State-regulated price components, EEG-levy: 6,4 ct/kWh



Source: Stiftung Umweltenergierecht, Ecofys, Fraunhofer ISI, Consentec

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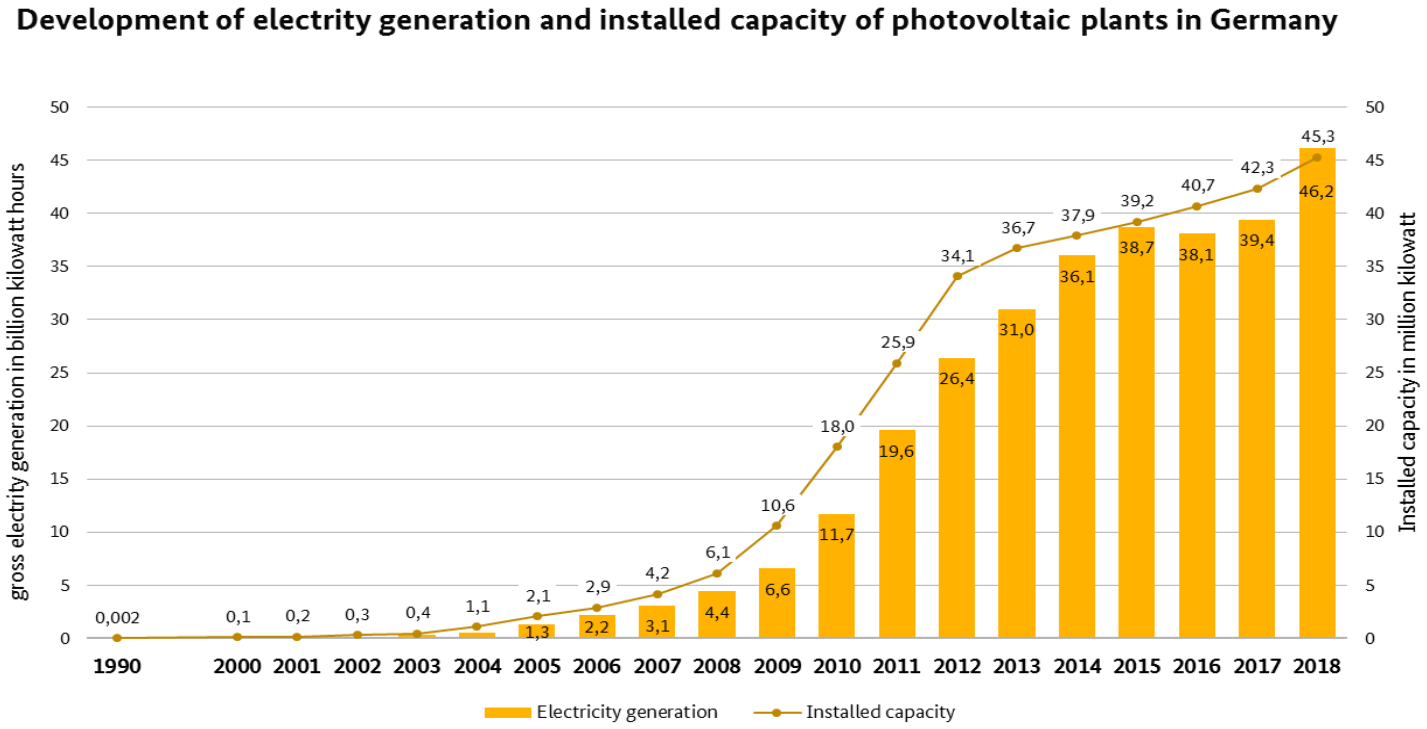
Annual Installed Capacity PV

- RE in total: 118.000 MW , 225 TWh = 38% RE share
- Photovoltaics in total: 46,2 GW = 8 % share on total energy consumption



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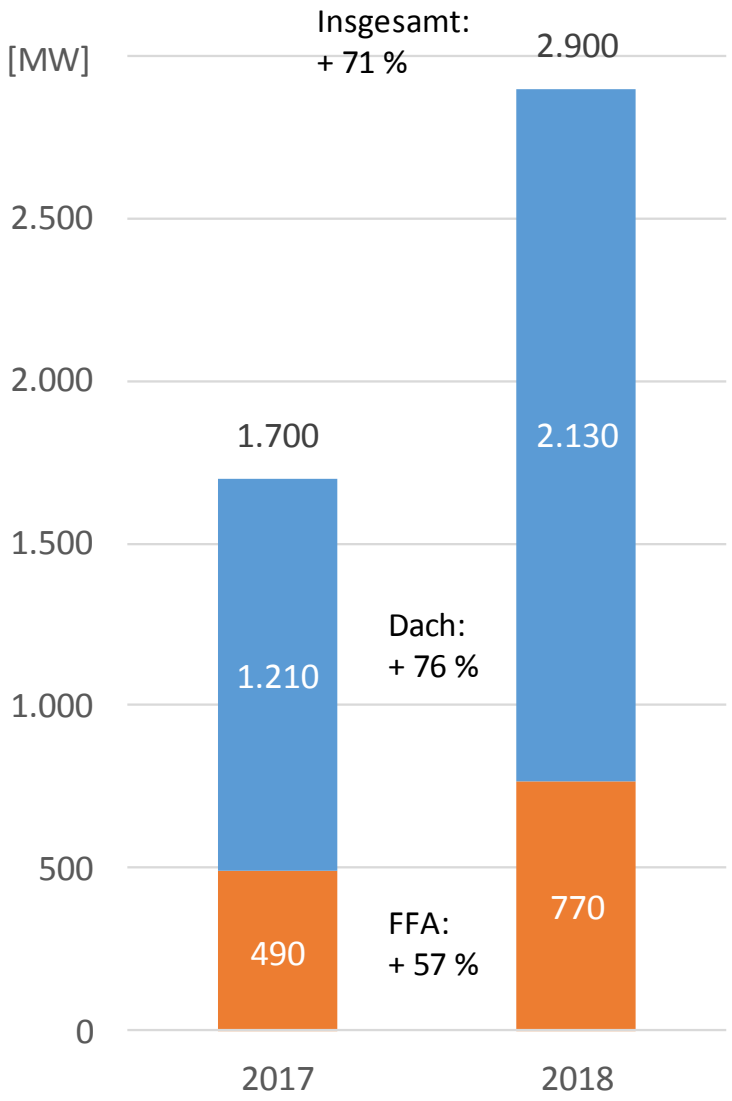
Installed capacity PV 2017 - 2018

- Strong increase from 2017 to 2018 about 70%
- installed capacity in 2018: 2.900
- 2.130 MW on rooftops and 770 MW free-installed plants



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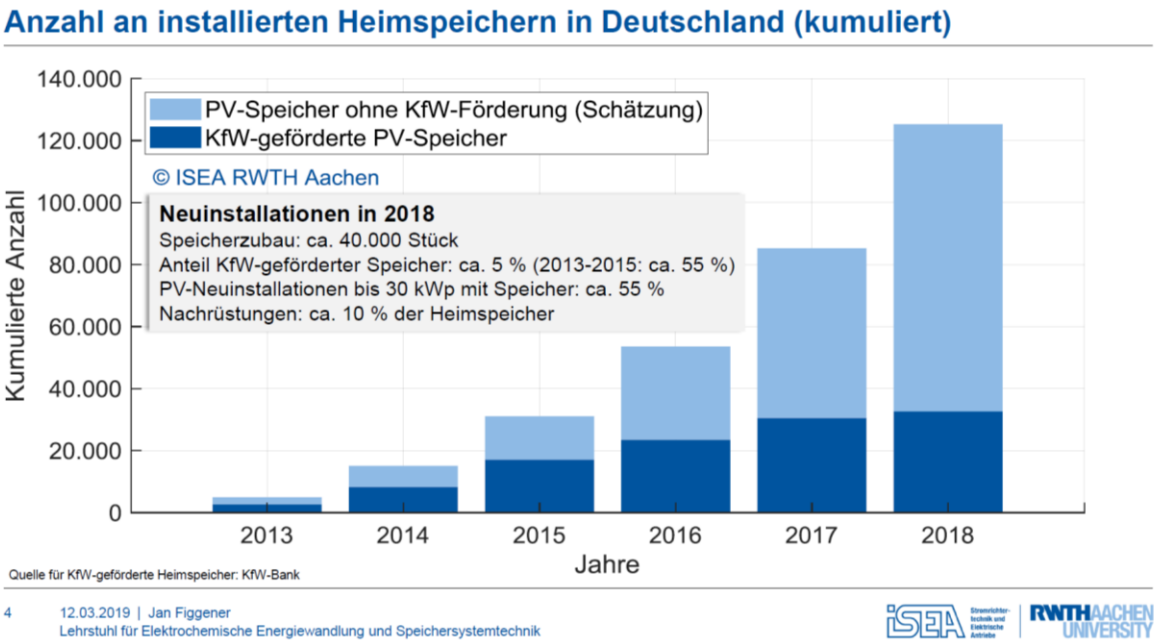
PV-battery systems

- Every 2nd PV-system lower 30 kW are installed with an PV-battery
- 2018 in total more than 120.000 PV-battery-systems
- one third were installed with KfW support programme



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Legal Framework: Renewable Energy Source Act

Feed-in-tariffs for all rooftop plants:

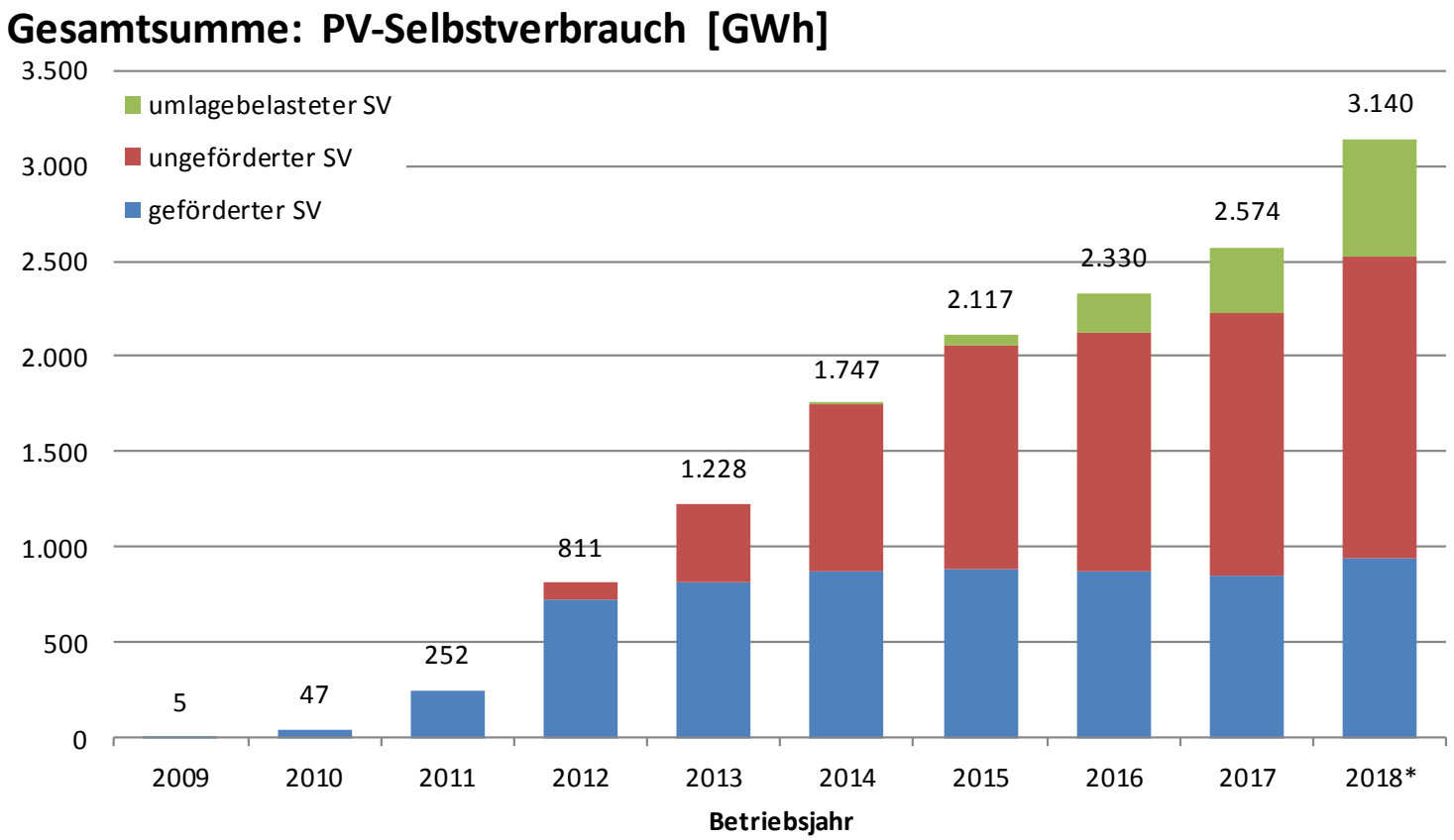
Feed-in-tariffs	bis 10 kW	bis 40 kW	bis 750 kW
EEG 2017 ab 1.4.2019	11,63 ct/kWh	11,32 ct/kWh	9,39 ct/kWh

Self-consumption is allowed in Germany:

- Identity of operator and consumer necessary
- Time-matched production and consumption
- No EEG-levy for small units below 10 kW and 10 MWh per year / 40% EEG-levy for larger units / 100% for fossil fuels with exemptions
- Wide range of rules from laws and provisions, privileges concerning taxes and business law
- High benefits by avoiding electricity tariff (about 29 ct/kWh)

Self-consumption: in 2018 about 3 TWh

Self-consumption : no EEG-levy for small units below 10 kW, 40% EEG-levy for larger units



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Landlord-to-tenant electricity supply

What?	Landlord invest into PV-systems and provides the electricity to his tenants, living within this building
How ?	Landlords will receive the Premium per kWh paid for the electricity supplied Rules are set out: to ban landlords from making this contract part of the rental agreement and also to introduce a cap on the price
Who?	Landlord or plant operator receives the premium
How much?	Between 2,8 and 3,8 Ct./kWh, depending on system-size

Conclusions

- High acceptance of PV (contrary to wind power on land) and popularity of self-consumption
- **Self-consumption is one pillar of electricity supply**
- **Landlord-to-tenant electricity supply at present on very low level (6 MW in 2018)**
- Incentives for self-consumption (with or without of PV-battery systems) are highly dependent of development of the electricity prices, design of privileges, levies and charges
- Challenge to integrate high number of small systems into energy system
  => Higher system costs, higher grid integration costs

➢ For the recently discussed 65% goal RE in 2030 we need more PV (about 4-5 GW/a)