

> **Country Presentation Germany**

50th IEA PVPS Task 1 Meeting – Kuching, April 2018

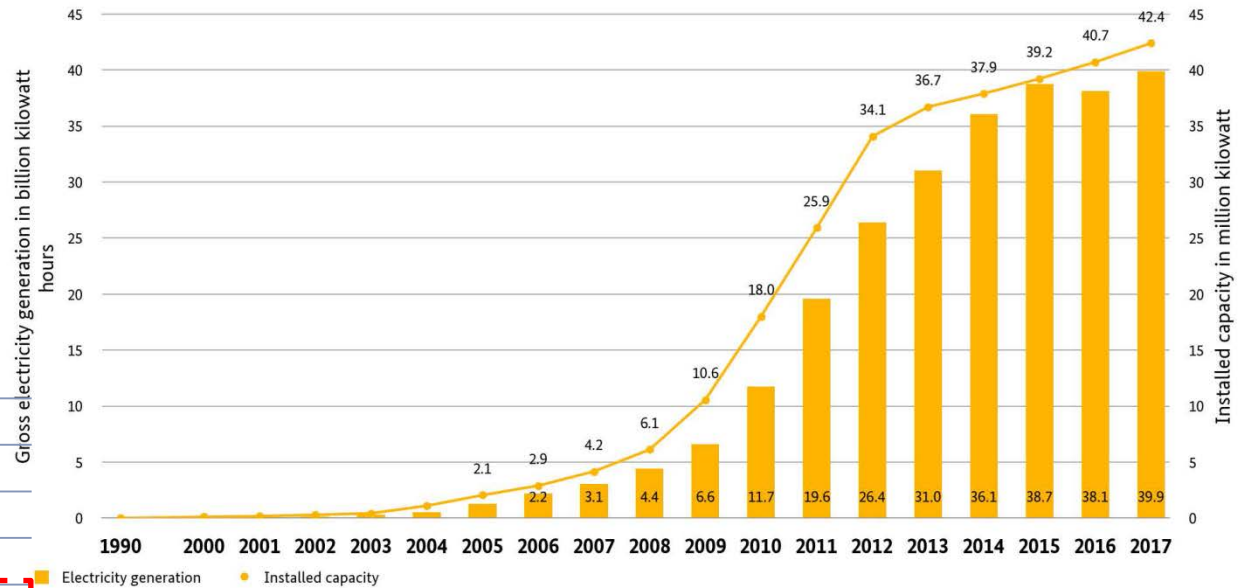
Annual Installations:

2013	2,6 GW
2014	1,2 GW
2015	1,3 GW
2016	1,5 GW
2017	1,7 GW

Political Goal ~2,5 GW

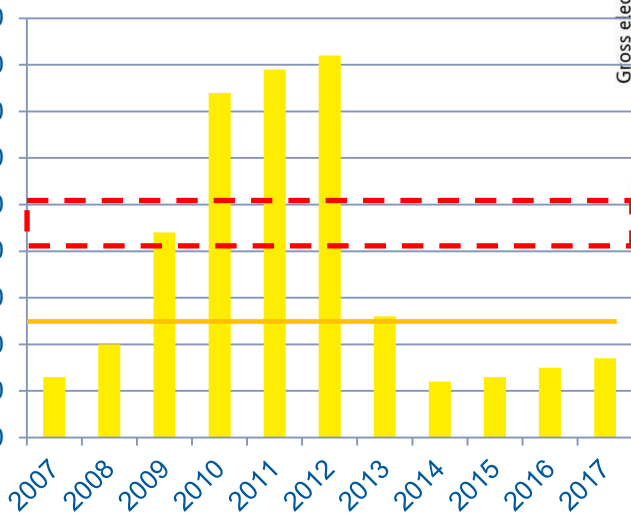
Necessary for RE-Scenarios:
100 GW total → 4-5 GW annual

Development of electricity generation and installed capacity of photovoltaic plants in Germany



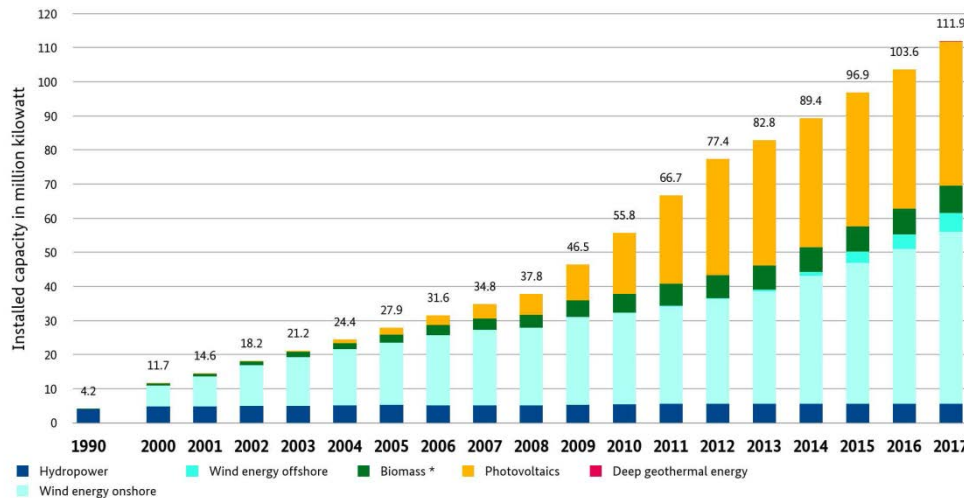
BMWi based on Working Group on Renewable Energy-Statistics (AGEE-Stat); as at February 2018; all figures provisional

End of 2017 was commissioning deadline for 520 MW from 2015 Tenders

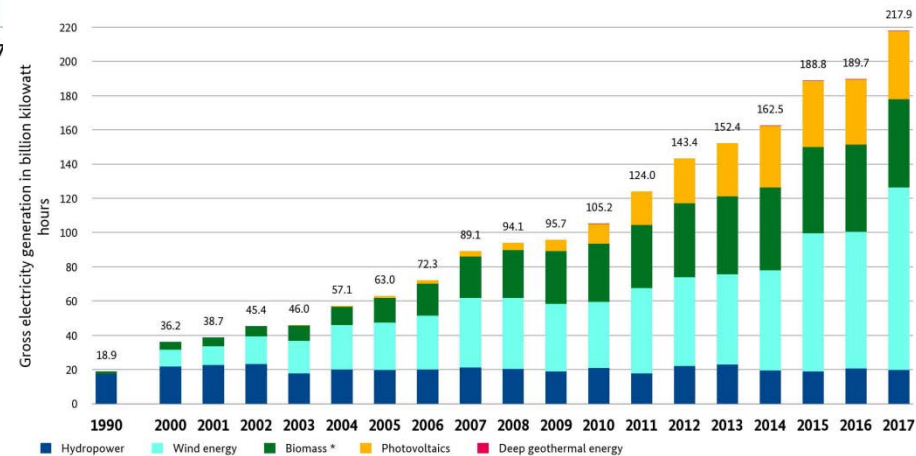


› Renewable Energy Production in 2017: 217,9 TWh (PV: 39,9 TWh)

Development of **installed capacity** for renewables-based electricity generation in Germany

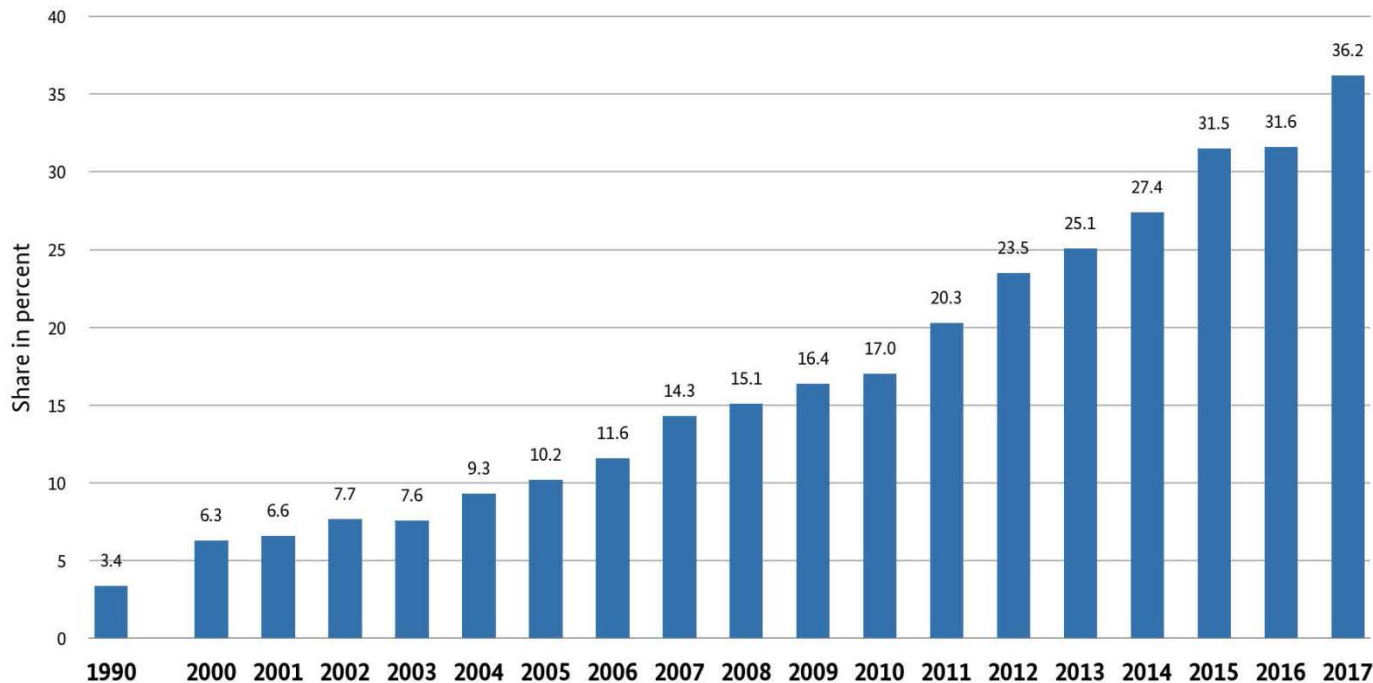


Development of renewables-based **electricity generation** in Germany

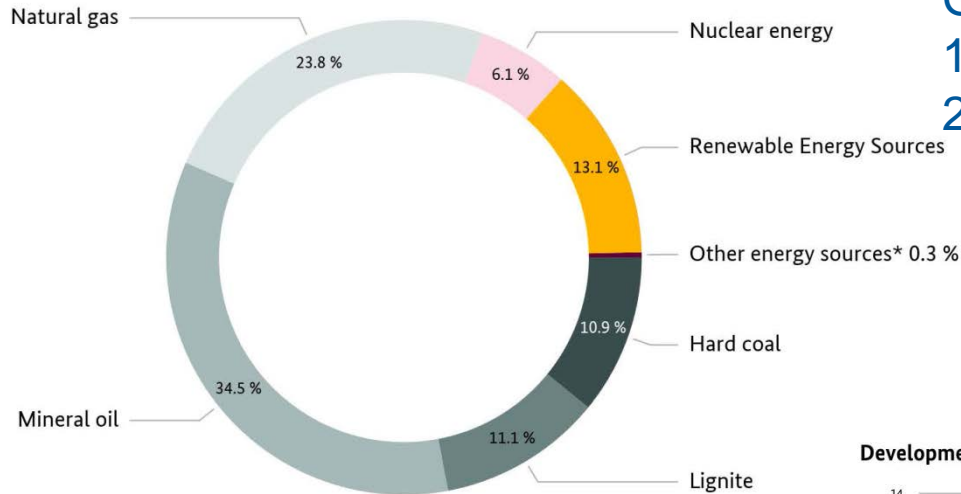


Goals:
35 % in 2020,
40-45 % in 2025
80 % in 2050.

Development of renewable energy share of gross electricity consumption in Germany

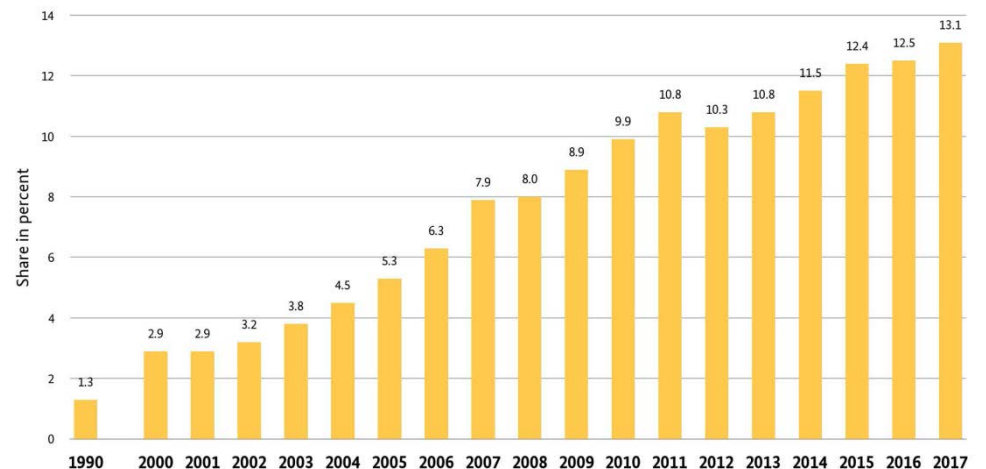


Total primary energy consumption in Germany 2017
Total: 13,550 Petajoule



Goal:
18 % of total gross energy consumption in
2020

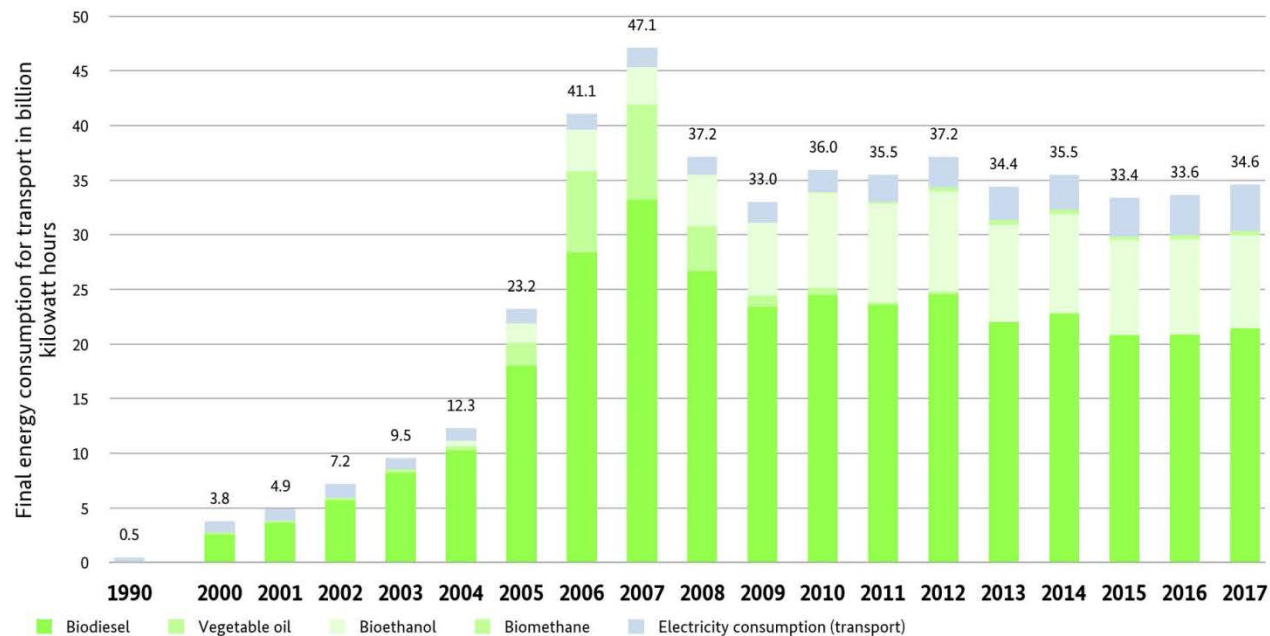
Development of renewable energy share of primary energy consumption in Germany *



> Share of renewables in Transport ~5%



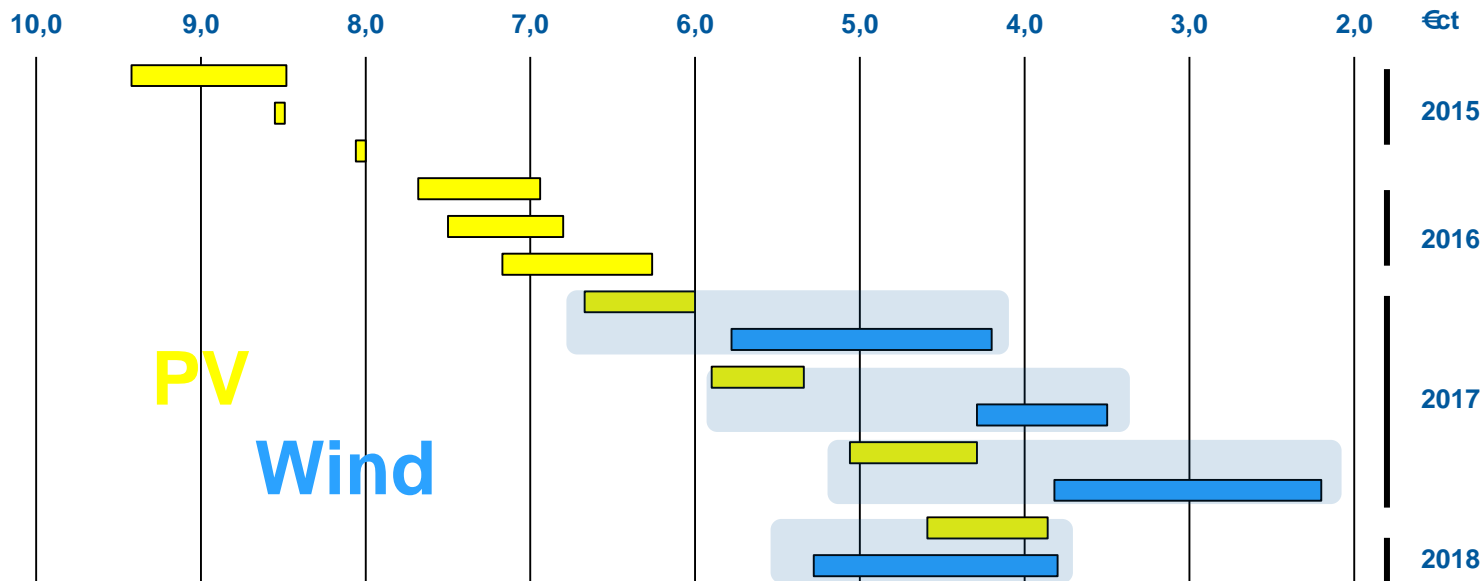
Development of final energy consumption in transport from renewable energy sources in Germany



BMWi based on Working Group on Renewable Energy-Statistics (AGEE-Stat); as at February 2018; all figures provisional

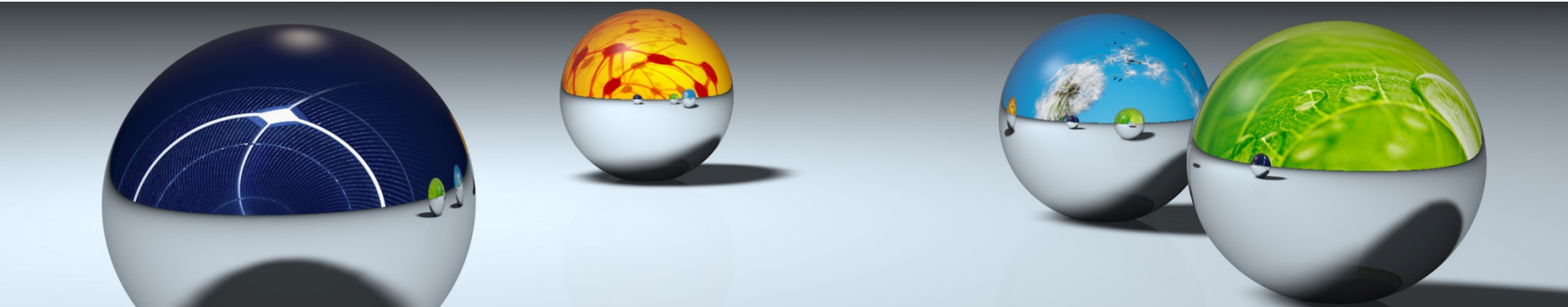
> Self consumption

- > New Model: “Mieterstromanlagen”, legal framework for self consumption of house renters without being system owners. 1,7 MW installed until now since July 2017
- > FiT:
 - > Almost stable since Sep 2015, due to permanent failing of reaching installation goals.
 - > Classic FiT only for systems <100kW, Market integration Model up to 750 kW
- > Tenders for ground mounted and large Systems (~600 MW/year)



PV Industry – Module production

Module manufacturer	Production capacity [MWp]	Employees	Technology
Solarworld AG ⁷	860	> 250	Si
CS Wismar GmbH (Sonnenstromfabrik)	525	n/a	Si
aleo solar GmbH	320	n/a	Si
Astronergy Solar Module GmbH	300	n/a	Si
Axitec Energy GmbH & Co, KG	300	<50	Si
Heckert Solar GmbH	300	51-250	Si
Solarwatt GmbH	250	51-250	Si
ML&S GmbH	200	n/a	Si
Solibro GmbH (Hanergy)	120	n/a	CIGS
Avancis GmbH (CNBM international)	100	> 250	CIGS
Calyxo GmbH (Solar Fields LLC)	85	51 - 250	CdTe
AxSun Solar Energy GmbH & Co. KG	70	n/a	Si
asalo Technologies GmbH (TUSAI Holding)	40	<50	Si
Sunset Solar GmbH & Co. KG	40	< 50	Si
Solarnove GmbH	35	< 50	Si
ALGATEC Solarwerke Brandenburg GmbH	25	< 50	Si
SI Module GmbH	25	< 50	Si
GSS Gebäude-Solarsysteme GmbH	20	<50	Si
Hörmann Novo Solar GmbH	10	<50	Si
Manz CIGS Technology GmbH (NICE)	10	150	CIGS
Heliatek GmbH	R&D	n/a	OPV
Solarfabrik CL GmbH	n/a	< 50	Si
Soluxtec GmbH	n/a	< 50	Si
Sunware Solartechnik GmbH & Co. KG	n/a	< 50	Si
Azur Space Solar Power GmbH	n/a	51-250	GaAs



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