



The Economic Development Agency of Germany



Development of Renewable Energy Systems

Total capacity of renewables (End 2000)

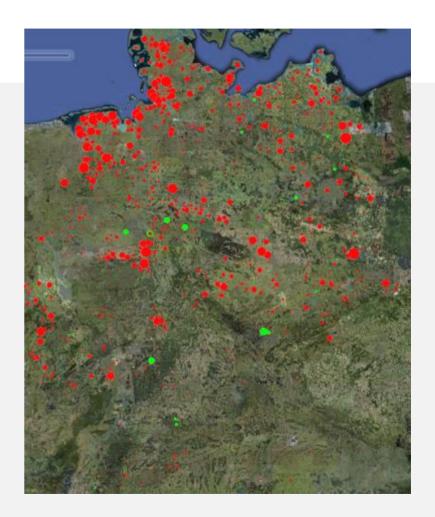
~ 30,000 installations



PV

Biomass

The circle **diameter** is proportional to the electrical capacity



Sources: 50HertzT, TenneT, Amprion, TransnetBW, internal data

Development of Renewable Energy Systems

Total capacity of renewables (2020)

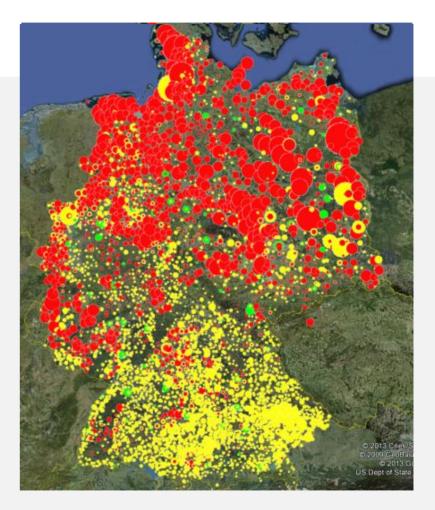
> 1.8 million installations



PV

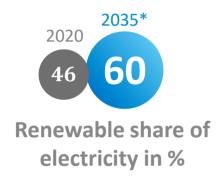
Biomass

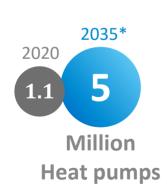
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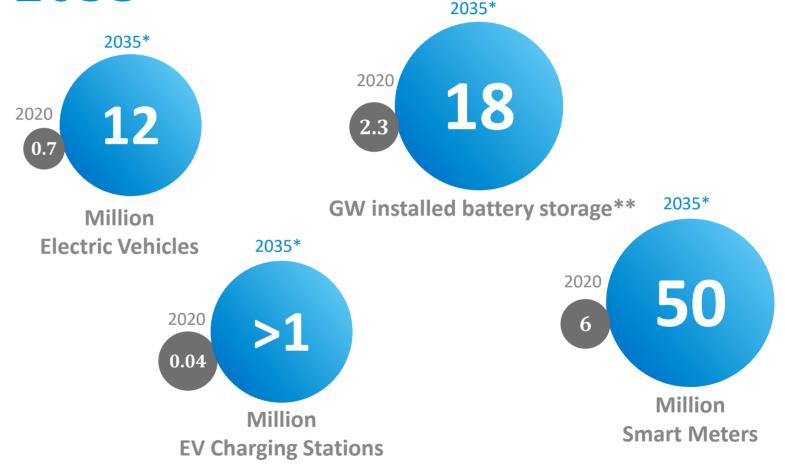


Sources: 50HertzT, TenneT, Amprion, TransnetBW, internal data

Germany's Energy Market Will Look Different By 2035

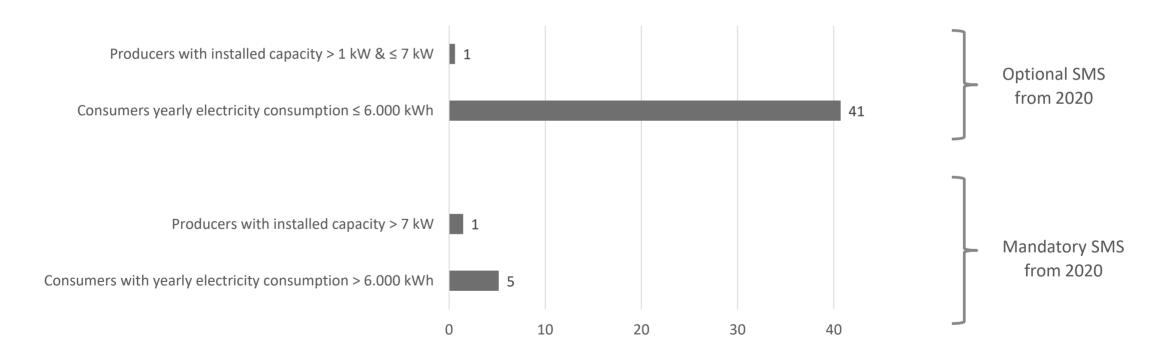






Smart Meter Roll-Out In Germany

By 2032, >50 million meters will be digital – and many 'smart'

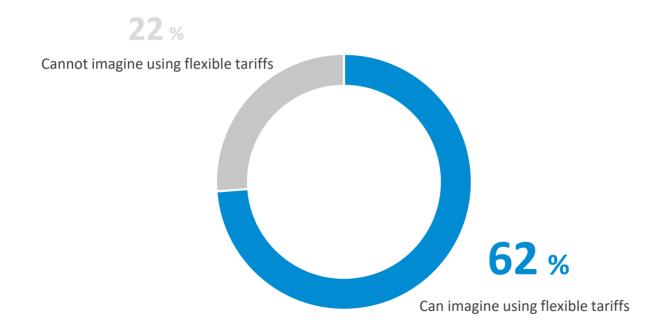


Source: Federal Network Agency, Monitoring Report 2020

Smart Meter Roll-Out Enables New Business Cases

Customer approval for flexible tariffs

In % of respondents in Germany, 2019

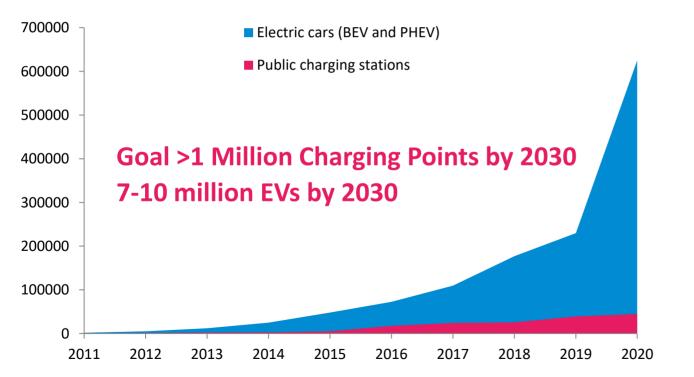


Source: Bitkom, 2020



2020: EV Market Takes Off - Charging Infrastructure Following

Electric vehicles (PHEV + BEV) vs. public charging stations (Number of units, 2011 - 2020)



Growth in the EV market creates demand for charging stations – potentially equipped with batteries and smart grid technologies

Source: IEA 2018, 2019 © GTAI 8

Vehicle-to-Grid: New Standards on the Way





Co-Project between

- The Mobility House (energy management technology)
- ENERVIE (energy supplier)
- Amprion (transmission system operator)
- Nissan (V2G vehicle)

2018: First Nissan Leaf prequalified for primary control power.

2020: General V2G communication standards under development.

Which EM Services are Most in Demand?

Range of services offered in Germany



Source: BfEE, Empirical analysis 2020 © GTAI 10

Attractive EMS Incentive Programs



Ready to Help Your Company Set Up in Germany Successfully



"The market potential, the support of GTAI and the Brandenburg Economic Development Board, the proximity to important political decisions in Berlin, space to grow and the access to highly-skilled labor locally, as well as from all over Europe, eventually all counted for our decision."

Dr. Christina Wuerthner, Chief Finance & Strategy Officer

"Starting in mid-2019, GTAI helped us solicit more than 130 locations around Germany and systematically compare them. We were very enthusiastic about the opportunities and resources on offer in Germany."



Thomas Chromtzka, Head of Strategy

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