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The acceleration of the German Energiewende

The plans of the new federal government:

Background and challenges

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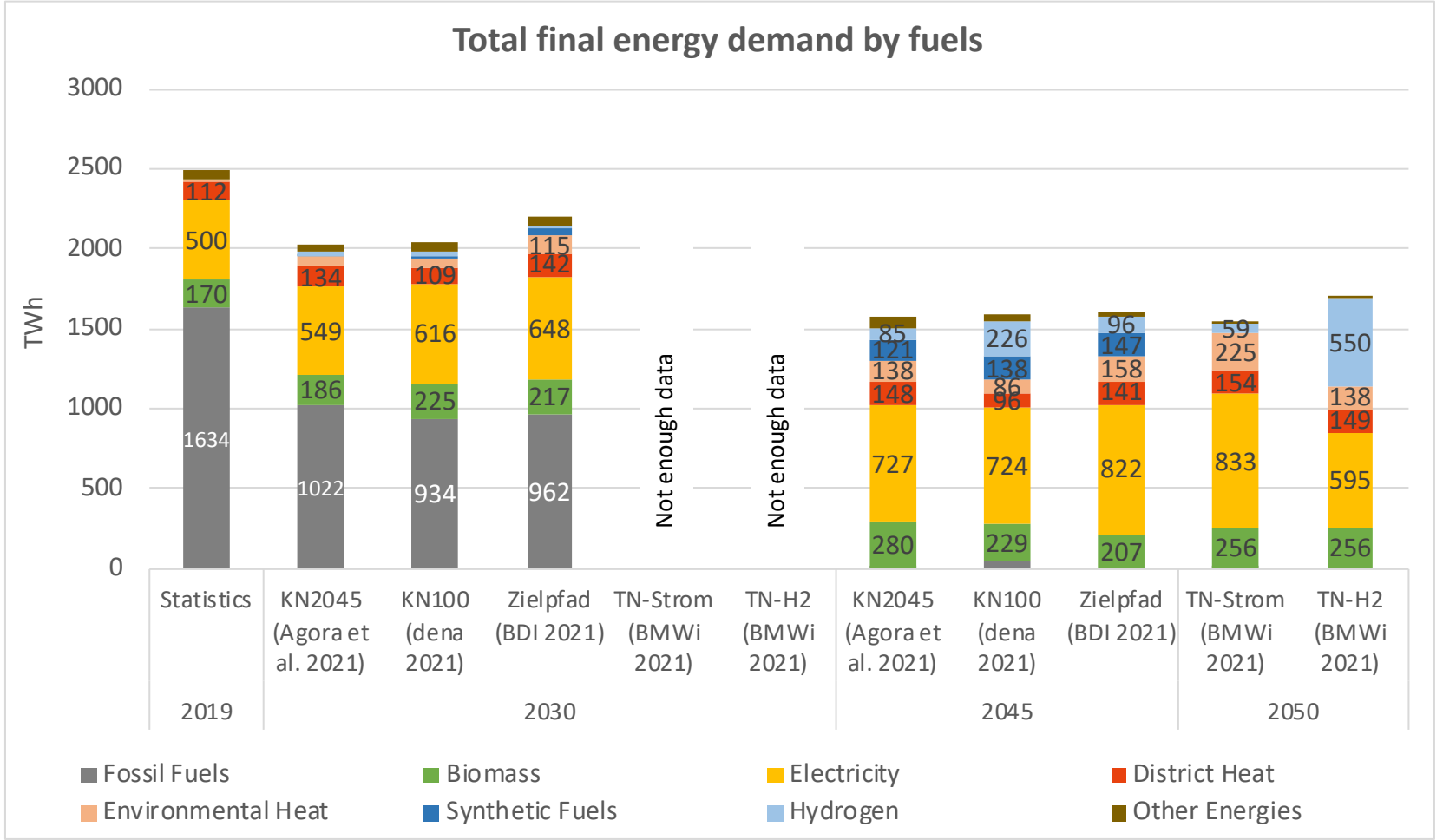
Key targets and plans of the new German government

- Keep **GHG targets** (2020: - 41 %): - 65 % to 2030, - 88 % to 2045, climate neutral 2045
- **Accelerate electrification and expansion of PV and wind:**
new target is **80%** of gross power demand of 680 to 750 TWh in **2030**: 544 to 600 TWh
(was 65% of ca. 600 TWh before: 390 TWh; currently just under 45%, ca. 250 TWh)
- => by 2030: 200 GW of **PV** (was 100); 30 GW **offshore** wind (was 20); no target for onshore wind, but 2% of the land as priority area (currently 0.5%)
- By 2030: 50 % of **heat** in buildings „climate neutral“; from 2025, all new heating systems with 65% renewables: a chance and challenge also for district heating
- By 2030: 15 mn **electric vehicles** (mostly BEV?), i.e. ca. 1/3 of stock
- By 2030: 10 GW of **electrolysers** (was 5 GW), power from offshore wind and import
- **Coal** phase-out „ideally“ by 2030; **nuclear** phase-out will be completed 31 Dec. 2022
- Energy efficiency? Mentioned 3 times (but some policies for buildings and industry)

Source: Coalition treaty

Background: comparison of scenario modelling studies

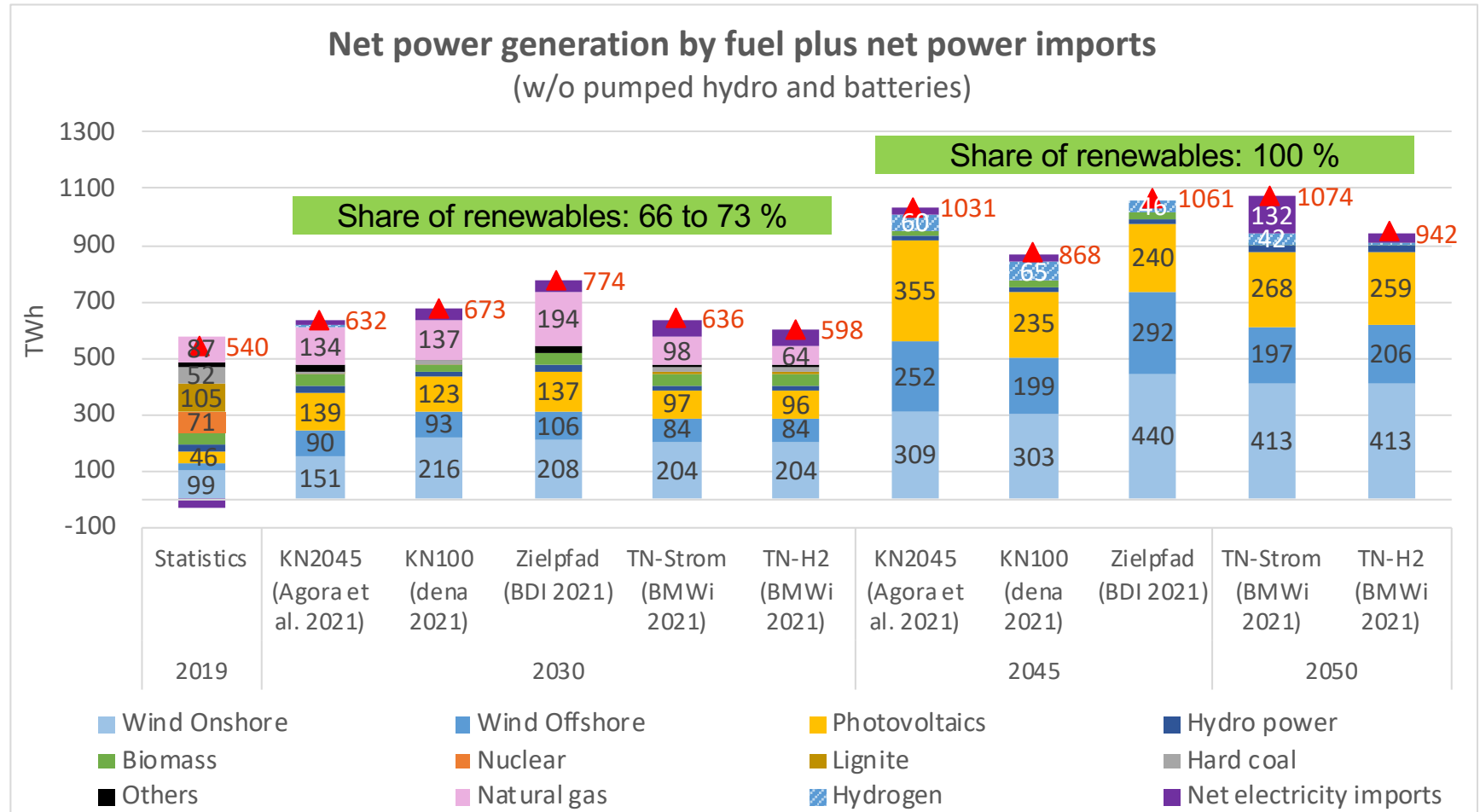
1) Final energy



Source:
Wuppertal Institute
(unpublished)

Background: comparison of scenario modelling studies

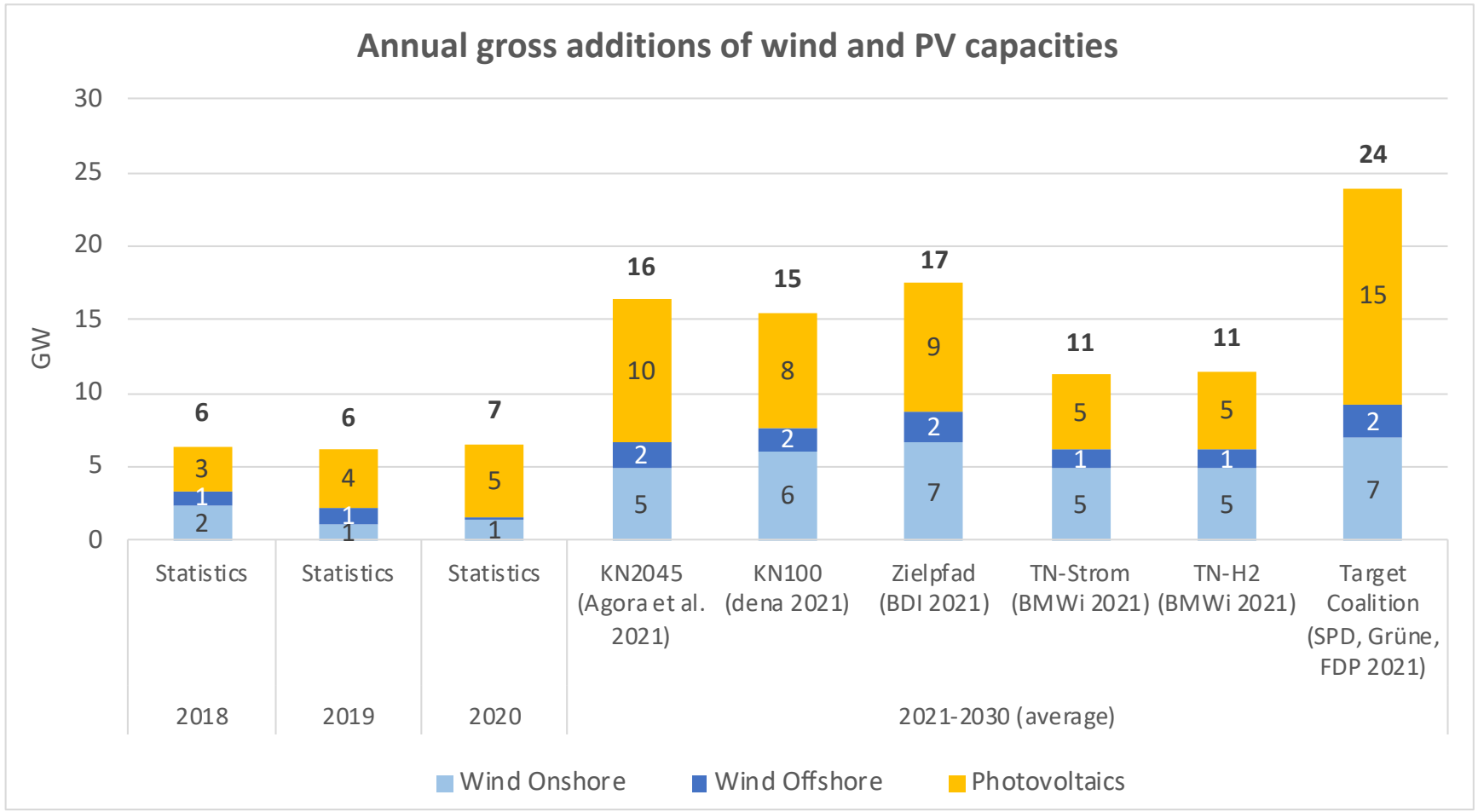
2) Electricity demand and generation



Source:
Wuppertal Institute
(unpublished)

Background: comparison of scenario modelling studies

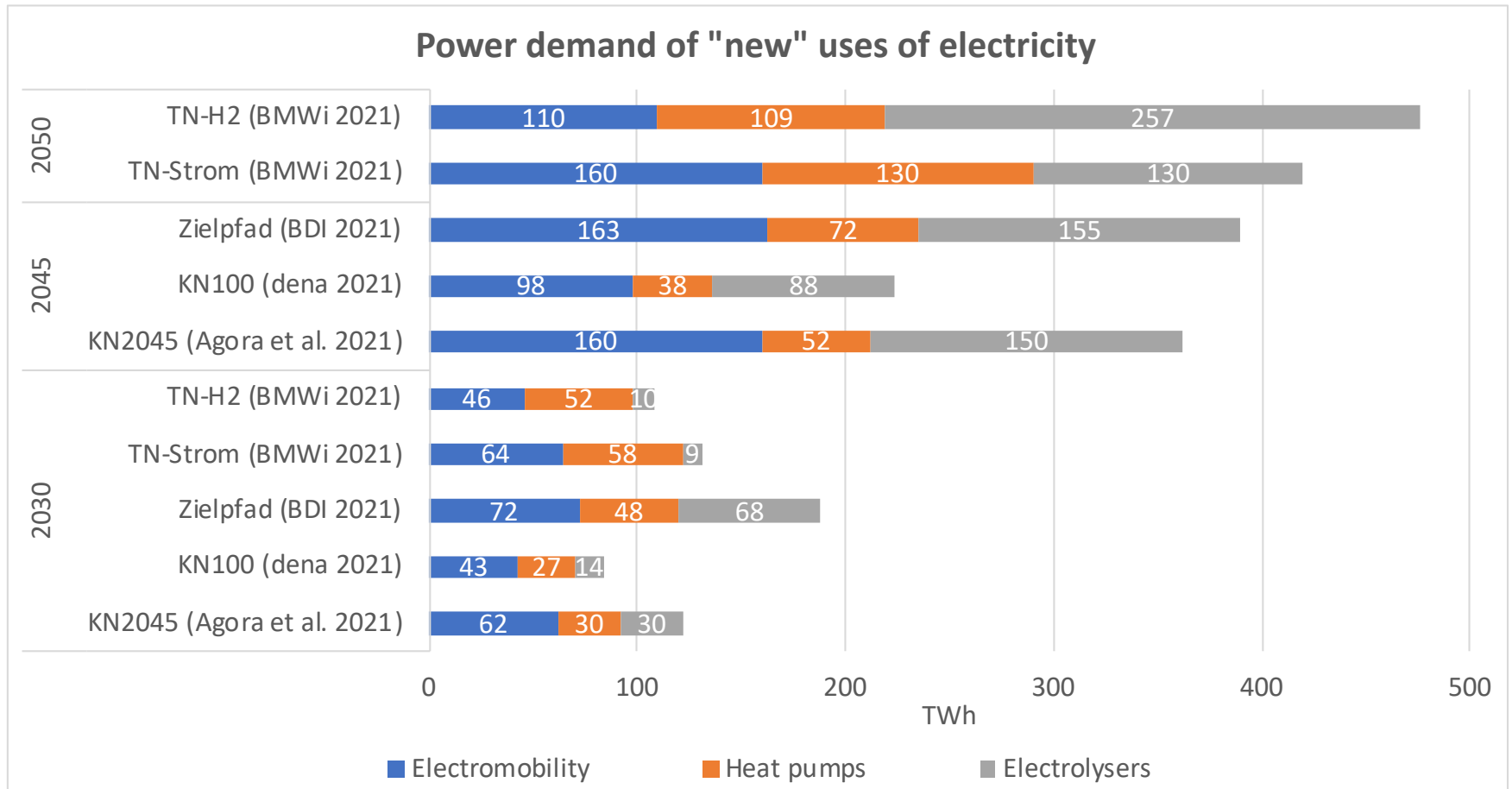
3) Expansion of PV and wind



Source:
Wuppertal Institute
(unpublished)

Background: comparison of scenario modelling studies

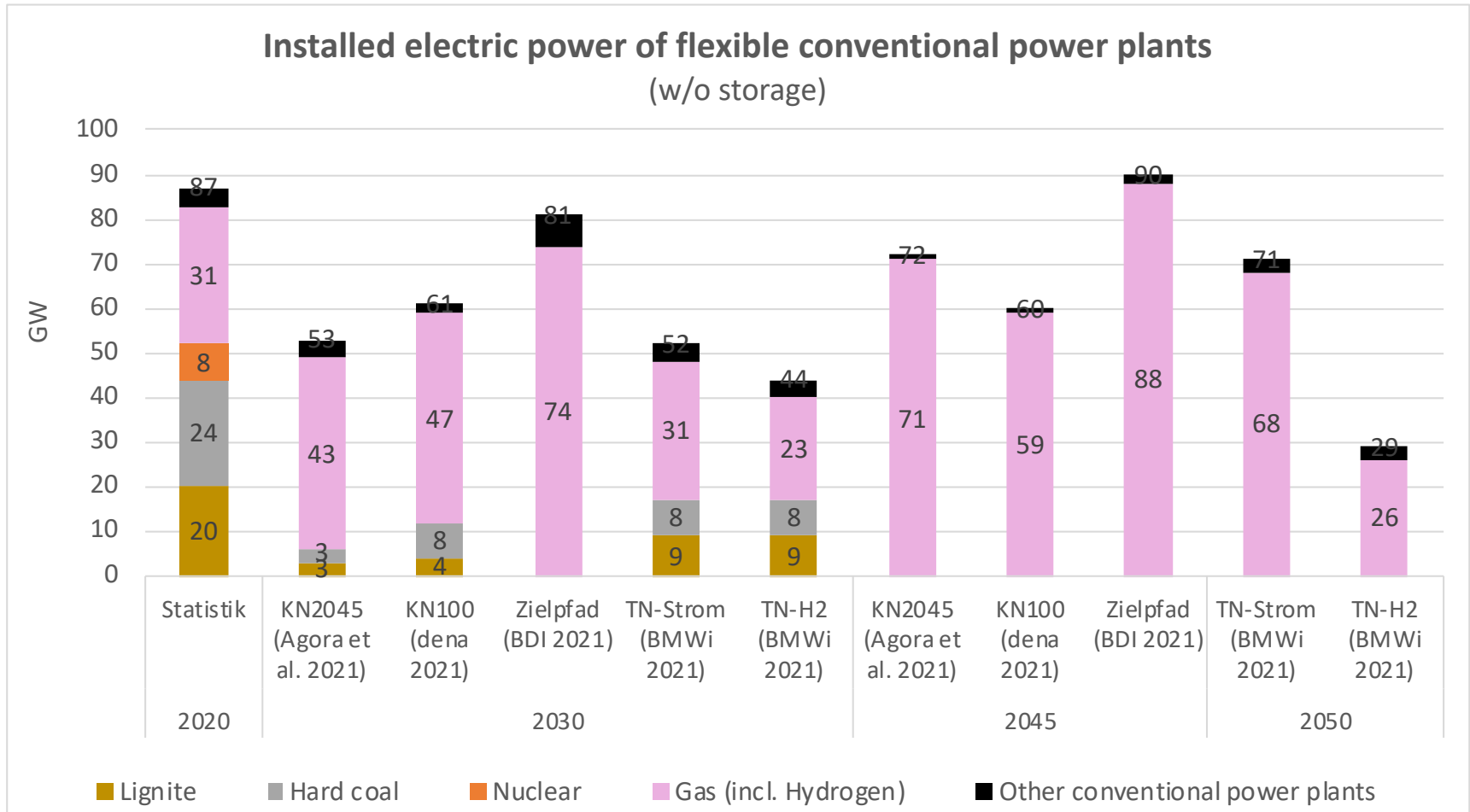
4) Electrification



Source:
Wuppertal Institute
(unpublished)

Background: comparison of scenario modelling studies

5) Backup power plants



Source: Wuppertal Institute (unpublished)

Conclusions and challenges

- The **new German government** plans to **accelerate** electrification, expansion of renewable energies (x4 vs. recent years!) and coal phase-out
- => Coal and nuclear to be replaced by renewables, flexibilities, and some new gas capacity („H2 ready“)
- **Challenge:** How to achieve all those targets? And the flexibilities?
- Detail of **policy** instruments is still largely unclear – BMWK expected to come out with first proposals soon
- Coalition treaty also mentions
 - plans to start development of new energy market design in 2022,
 - a target grid plan for climate neutrality, and
 - accelerating grid projects (electricity, with particular attention to power highways, hydrogen),
 - accelerating smart meter roll-out

Thank you for your attention!

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