Web Meeting 12.01.2021

Upcoming Transnational Rules for Charging Device Control by DSOs in A-CH-CZ

Agenda

Karl Scheida, Oesterreichs Energie

Upcoming Transnational Rules for Charging Device Control by DSOs in A-CH-CZ

Agenda

Time	Topic	Speaker
13:30	Introduction, Background, Targets why A-CH-CZ	STADLER, OE
13:45	Grid Simulations Austria Additional Costs of E-Mobility	SCHEIDA ,OE
14:00	DSO and EV in Switzerland Czech Republic Austria	BADER, VSE HES, ČEZ Distribuce NENNING, OE
14:15	Technical Requirements for Wallboxes at 1.1.2022 Including **Discussion**	ELBS, OE
15:00	End	

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Grid Calculations

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Starting Point
Government Agenda 2020 (Focus on 2030) → „2030-Goals“ (2018)

- Transition from fossil energy sources to electricity (heating, air-condition, mobility…)
- Future generation of electricity by 100% renewables

Hard goals:

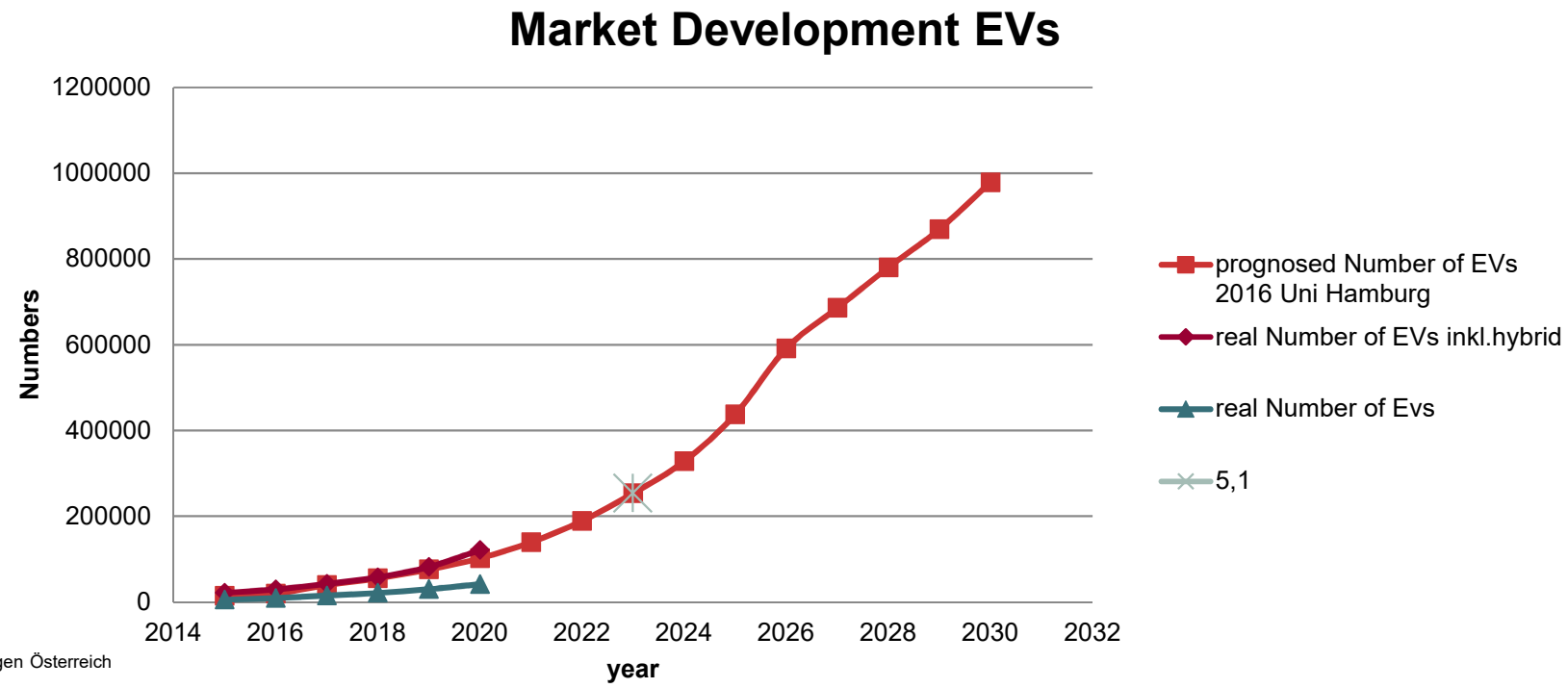
- 30% EVs of all passenger cars by 2030
- 8 times more PV power plants (comparing 2020 with 2030)
- Wind power plants approx. 3 times more (from ~ 3,1 GW to 9 GW)

→ **Grids will be stressed far beyond present day**

Drivers

- Carbon free generation
  - Different impact depending on the land use → 50-75% power plants in grid level 6 and 7
  - Wind turbines‘ number decrease from East to West
- Demand side „substitution“
  - mobility
  - Heating and air-condition
- Structures and flexibility
  - Prosumer, energy communities, dynamic energy prices, power related prices
  - Ancillary services from LV-level

Drivers



Netzberechnungen Österreich

Consequences

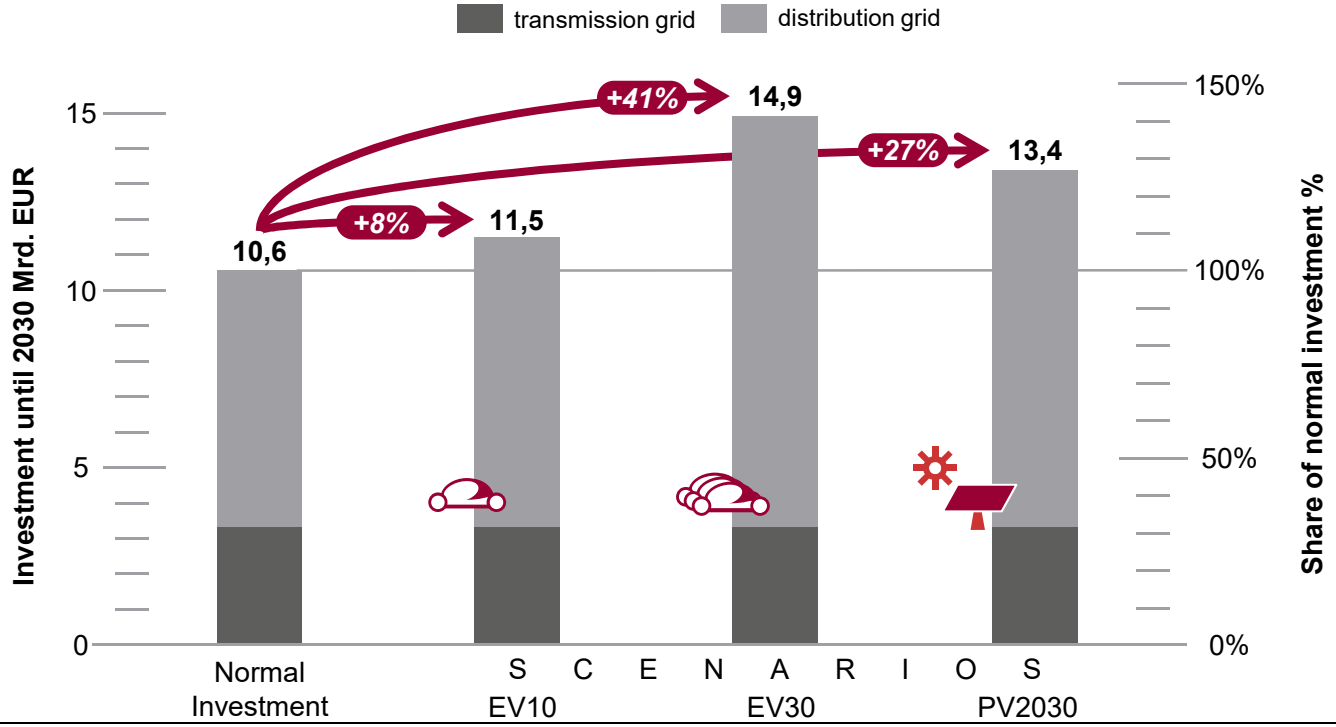
- enormous increase in the grid‘s abilities and functions
  - Transport of energy in both directions
  - Smart functions
  - Quality and reliability of supply

➢ need of engineer‘s knowledge, it-security, time and money

Methods

- Other studies
- Coordinated calculations of all major DSOs
- Consistent parameters
- Individual fundamental grid development strategies and specific costs
- Charging and PV without restrictions simulated
- Extrapolation of the not individually calculated grids
- Scientific board: AIT, FH Vorarlberg and Montanuni Leoben
- June 2019 to October 2020

Costs and Share (Transmission and Distribution Grids)



Output and Results

- Significant rise of the costs additionally to the normal investment due to EVs and PV
- LV and MV mainly affected (as expected)
- PV tendency to bigger power plants (connected in MV) will trigger higher investments up to the HV-level

Download the study: https://oesterreichsenergie.at/die-welt-des-stroms/stromnetze/studie-netzberechnungen-oesterreich.html

Measures

1. Implementation of a significant cost component on active power in grid tariffs
2. Legal use of metering data for grid planning and operation purposes
3. Limitation of max PV-infeed (ratio due to kWp) to avoid short peaks
4. Limitation the max EV-charging power in times of high grid load

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