Implementation on the ground – perspectives of energy utilities on systems integration, market design and the energy transition

Sascha Schröder
EUFORES Inter-Parliamentary Meeting, 27 October 2023
2022

EUR 8.6 billion
Sales

EUR 463.5 million
Result

Ø 10,185
Employees

1.4 million
Customers (Electricity)

0.7 million
Customers (Natural Gas)

0.7 million
Customers (Telecommunication)
Northwest Europe: the cornerstone for a H2 pipeline grid

Northwest Europe as starting point

- Transforming existing pipelines for the transport of Hydrogen
- Initial pipeline grid HyPerLink by Gasunie
- Connecting the Netherlands, Lower-Saxony, Bremen and Hamburg
The development of an integrated hydrogen economy

1. **Renewable energies**
   - On- and offshore capacity with additional potential for deployment

2. **Initial pipeline grid**
   - Connecting production, storage and usage of hydrogen via pipelines

3. **Sea and inland ports**
   - Important logistic hubs with potential for import of hydrogen

4. **Large scale storage facilities**
   - Introducing flexibility to an energy system based on renewables

5. **Market in transport sector**
   - Usage of green hydrogen for heavy duty and other transport applications

6. **Market in industry sector**
   - Usage of green hydrogen for industry applications like steel production
H2 electrolysis: Locations close to power generation reduces network extension needs

Gasunie/Thyssengas/TenneT: Quo Vadis Elektrolyse, July 2022 / ACER's decision on alternative bidding zone configurations, Annex I, August 2022
EWE NETZ operates one of Europe’s most stable electricity grids

Over 95% of electricity in the network comes from renewable energies

- ≈62,500 km low voltage grid
- ≈21,000 km Medium voltage grid
- Outstanding grid reliability in Europe

≈21,000 km
Medium voltage grid

≈62,500 km
low voltage grid
New solar PV installations connected to the grid

- Exponential growth is a challenge
- Traditionally, all PV installations were registered to receive subsidy payments
- Dark number of unregistered units for a range of technologies (e.g. plug-in PV, heat pumps, battery storage, EV charging)
- Focused network reinforcement requires relevant data
Alterric: The leading on-shore wind power generator in Germany is part of the EWE group

- Onshore wind is the generation backbone of the future energy system
- Due to the cubic wind/generation curve, site-specific CfD remuneration schemes remain necessary

2400 megawatts of installed capacity
4.0 billion euros in investments by 2030 planned
9400 megawatts in the project pipeline
400+ employees
Thank you!