Introduction eFarm project

Germany’s largest green hydrogen mobility project in operation

eFarm in North Friesland represents the entire value chain from production to use of 100% green hydrogen

The project won the „German Renewables Award“ 2020 as well as the „German Mobility Award“ in the category of change

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Dimensions of the project

- 2 H₂ filling stations
- 5 H₂ production locations at wind parks
- 1,125 MW total output
- 7 mobile storage devices for H₂-transport
- 2 fuel cell buses for public transportation
- +60 fuel cell cars
Deep dive: Major steps of the value chain
Investments of 16 mio. to be collected:

- 50% support through **NIP II by BMDV**
  - **Prerequisite** to obtain further investments

- 30% through loans, provided by **3 banks**
  - **Solid business case** and long-term loans as success factors

- 20% in equity, provided by a consortium of **20 regional shareholders**
  - Key for **regional acceptance** by important stakeholders
Stakeholder commitment &
public acceptance

- Stakeholders as shareholders
  - Regional participation & value creation: >3,000 citizens as “indirect” shareholders
  - Avoidance of shutdowns for wind parks boosts approval

- Integration into local structures
  - The district included new technologies in transport tenders & covers surplus costs
  - Local workshops included to establish service network
  - Buses generate public visibility e.g., as attraction for school children

Challenges in the approach:

- High number of shareholders requires coordination & participation
- Extensive approval procedures on federal and municipal level to be passed
Key success criteria for the eFarm project

- **Create hydrogen demand** to ensure solid business case and secure financing
- Foster **regional value creation** to increase stakeholder engagement & commitment
- **Mitigate permit & funding challenges** by proactive approaches and high level of transparency
GP Joule

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Hydrogen production site in Bosbüll
Mobile hydrogen storage in Reußenköge, Nordfriesland
Hydrogen refuelling station in Niebüll, Nordfriesland