Wind energy: Current situation in Germany

Status Wind energy onshore*	MW	No. plants
Netto-deployment 2017	4.866	1.405
Brutto-deployment 2017	5.333	1.792
Share of Repowering	952	315
cutback	467	387
Cumulated plants at 31.12.2017	50.777	2.867

*BWE (2018): www.wind-energie.de

National framing conditions

- Coalition agreement – political goals (CDU/SPD):
  - four GW Onshore-Wind (each year 2GW in 2019 and 2020) and a (not defined) Offshore-contribution
  - National Offshore-Testing area is planned in order to research Offshore-Potentials
- National Tendering scheme since 2017
- Setback regulations in some Federal states (10 x H in Bavaria)
- (financial) Participation laws in some Federal states (MV since 2017, TH is planned)

Current challenges in Germany

- Development of tendering scheme
  - “Faked” citizen projects
  - Maybe competitive bidding over different renewables

- Strong opposition in Baden-Württemberg (Stuttgart area etc.)
- (financial) Participation laws in some Federal states (MV since 2017, TH is planned)
- Synchronizing informal and formal planning participation

Research projects – Examples I

Planning Process

- Wind dialogue Saarland: stakeholder analyses, round tables and moderated discussions with municipalities in the Federal State of Saarland (IZES; funded by MWAEV)
- Monitoring of stakeholder structures in wind energy deployment: focus of methodology to measure actor diversity and examine interdependencies with acceptance (IZES; funded by UBA)
- Innovative approaches for an environmental and social acceptable wind energy deployment –inter- and transdisciplinary analysis of fields of action ‘. (Fachgebiet Umweltprüfung und Umweltplanung TU Berlin; funded by DBU)
- Organisation of expert talks „exchange of experiences with participation measures related to wind energy in the German Federal States.“ (FA Wind/ IASS; funded by BMWi)

Landscape planning / visualisation

- Scenarios for the deployment of renewable energies from a nature protection perspective – visual experiments with eye-tracking methods to examine wind energy related landscape perceptions. (PsyPlan; funded by BfN)
- Offshore (MLU/ETHZ/TUM; funded by Energy Ministry of Mecklenburg-Vorpommern / DBU)

Research projects – Examples II

Health

- TremAC: objective, psychological and physical analyses of vibrations and noise emissions; interdisciplinary analyses of wind energy noise (KIT, UST, TUM, MLU, UBI; funded by BMWi)

Synergy between nature conservation and renewable energies

- Accept EE: (MLU/Iner/IÖW/IASS/Bosch & Partner/(funded by the Federal Agency for Nature Conservation)

Technical Design

- Rotor blade construction – noise quality (LUH, Senvion)
- Design impact of mast construction (TUB, MSH + MLU; funded by BMWi + industry)

Development of intermediary institutions

Thüringer Energie- und GreenTech-Agentur (ThEGA)

- State of Thuringia established a fair wind energy certificate, evaluation and monitoring of fair planning and participation
- Consultation for community and private persons, incl. contracts
- Planners/operators can apply, certificate is evaluated and can be withdrawn
- Sets bench marks and norms, companies control each other

KNE

- Independent expertise, consultation, mediation
- Funds reports, e.g. on national heritage and wind energy, birds and bats
- Educates mediators from different regions – provide local/regional expertise