Barriers and Drivers for the socially inclusive and environmental sound uptake of wind energy. Insights from the WinWind Project

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University Alliance for Sustainability. Spring Campus,

April 1-5, 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 764717. The sole responsibility for the content of this presentation lies with its author and in no way reflects the views of the European Union.

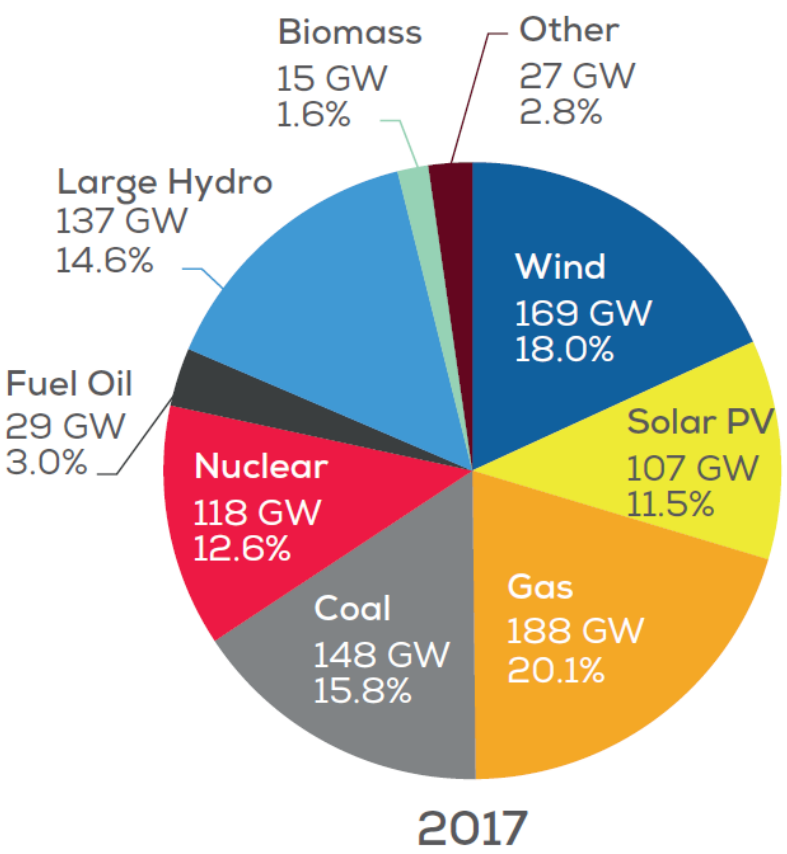
Overview

- Starting conditions: renewables in the EU and the role of wind power in Germany
- WinWind theoretical framework
- Attitudes and acceptance of RES technologies and energy transition.
- The dimension of the dissent
- Factors affecting social and local acceptance
- New policy focus on local communities and financial participation: Key to acceptance?
- WinWind preliminary findings

The starting conditions

- Many countries trying to streamline centralized, large-scale RES
  - encounter conflicts during the planning process/ construction
  - face opposition from the local communities
- Germany is undergoing a deep transformation of the energy system
- *Energiewende* characterised by
  - phase out of nuclear power plants
  - planned phase out of coal
  - extraordinary growth of RES, especially wind power
  - growth of decentralized structures
- Implementation of local energy projects played key role in this transformation
- New support system (auctions in place of FIT) risks to jeopardize the RES growth

Share of wind energy (WE) in 2017/2018 (EU 28)



- 189 GW of WE capacity are now installed in Europe. 10% are offshore.
- In 2018 WE covered 14% of EU electricity demand.
- The cumulative installed capacity in Europe amounted in 2018 to 11.7 GW.
- Gross annual wind installations in the EU-28 were 10.1 GW. (87% of installations in Europe)
- 65% of total wind power capacity in the EU was installed in just 4 countries: DE, UK, Fr, Swe.
- 44% new WE installations came from Germany and the UK (65% in 2017)
- This is the lowest amount since 2011 and reflects regulatory changes that European MS have undertaken and the change to auction systems resulting in a slow-down

Source: WindEurope 2018; 2019

Germany: WE boom soon over?

- Increase in wind power needed if Germany wants to meet its 2030 climate goals
- Because construction and commissioning of a wind turbine after approval take about a year, the boom is almost over
- The number of approved wind turbines is falling
- 3,100 installations approved in 2016 (Source: Bundesnetzagentur)
- Number of new permits in 2017: only 450
- In Länder with a high penetration as Schleswig-Holstein a moratorium prevents further expansion

REASONS:

- ✓ Lower propensity to invest because of the new tendering procedure for wind farms in force since January 2017
- ✓ In some states, spatial plans designating priority zones for wind energy have to be revised due to court decisions
- ✓ Energy transition is supported by the vast majority of the population
- ✓ ….but: one third is still undecided
- ✓ Local protest is increasing

Decreasing acceptance?

- Large energy and infrastructure projects lack broad support and provoke considerable local opposition
- Negative attitudes towards wind energy are now increasing, even in German regions with higher acceptance (and penetration) of RES
- The effects of these projects can be perceived as positive or negative and are assessed in different ways according to personal/political responses
- These often depend on the context, project-specific factors and personal attitudes
- Social acceptance of WE often contested due to:
  - ✓ public's perception of associated environmental and health impact
  - ✓ visual impact on landscapes
  - ✓ noise pollution (including infrasound)
  - ✓ disruption harming local fauna and flora
  - ✓ negative impacts on tourism
  - ✓ loss of land and real property value
- Local acceptance problems with wind farms at 500m distance to own home, high voltage power lines in the vicinity (500m)
- Media, developers and politics have often labelled local opposition too quickly as NIMBY (Not In My Back Yard)

The WinWind Project

Winning social acceptance for wind energy in wind energy scarce regions

WinWind

Project Outputs

Results | Policy Briefs and Factsheets | Published Articles | Reports | Communication Materials

Results

- Good Practice Portfolio (D4.2)
- Methodological Framework for best practice selection and analysis (D4.1)
- Stakeholder consultation and engagement plans (D3.2)
- Taxonomy of social acceptance drivers and barriers (D2.3)
- Conceptual Framework for analysing social acceptance barriers and drivers (D2.2)
- Literature Review: Technical and socio-economic conditions (D2.1)

Policy Briefs and Factsheets

- Policy Brief 1: The Clean Energy Package and its implications for Renewable Energy Communities (ENGLISH)
- Policy Brief 2: The New Balearic Law on Climate Change and the Opportunities for the Integration of Wind Energy in Protected Areas (ENGLISH)
- Factsheet 1: Challenges to socially-inclusive Deployment of Wind Energy

English | German | Italian | Latvian | Norwegian | Polish | Spanish

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Press

WinWind in the Press

- Vindkraft - klimaredder eller naturdreper?, Nettverk 4, October 2018 (NORWEGIAN)
- Krangel om vindmøller i Birkenes, Nettverk 4, October 2018 (NORWEGIAN)
- Ländlicher Raum, 2 2018 (GERMAN)
- Periodico Menorca, 12 June 2018 (SPANISH)
- Spanish Wind Energy Business Association (Asociación Empresarial Eólica), 06 Ju 2018 (SPANISH)
- Solarnews.es, 22 May 2018 (ENGLISH)
- REVE, Revista Eólica y del Vehículo Eléctrico, 27 April 2018 (SPANISH)
- Fosna-Folket, 26 January 2018 (NORWEGIAN)
- Tagesspiegel, 17 January 2018 (GERMAN)

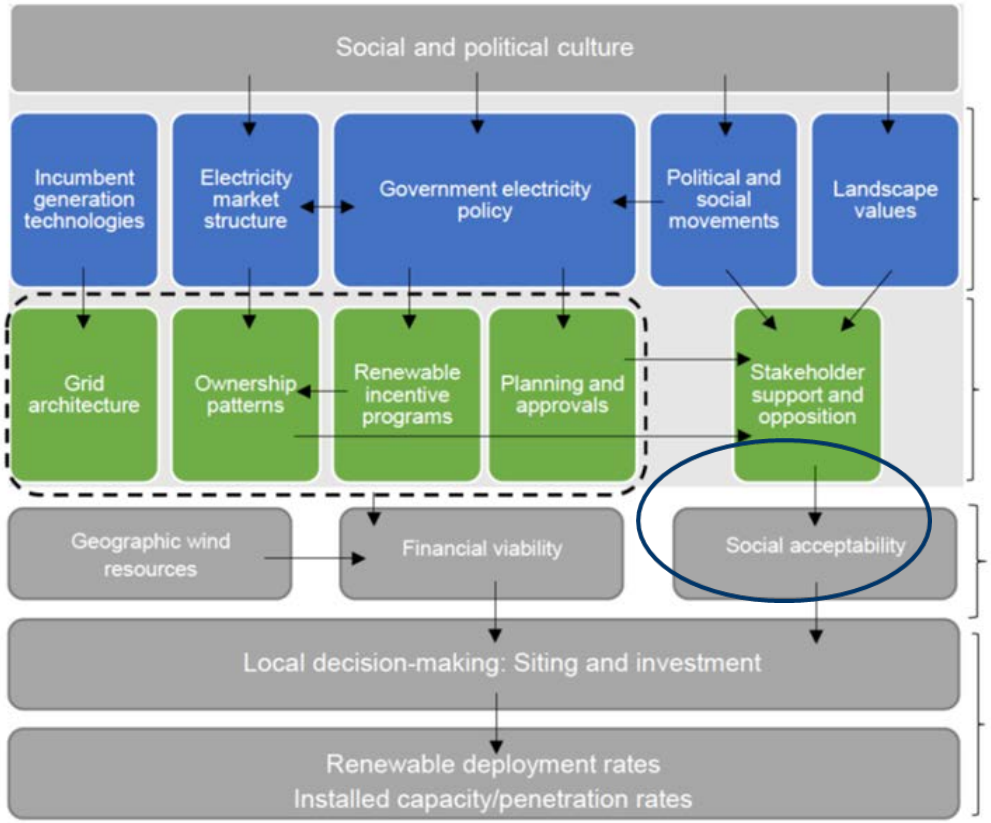
Freie Universität Berlin | seecon Ingenieure | ENEA Italian National Agency for New Technologies, Energy and Sustainable Economic Development | ecoazioni | Pūralās enerģētikas institūts Institute of Physical Energetics | CICERO Center for International Climate Research | NVE Norwegian Water Resources and Energy Directorate | KAPE | ECORYS | ACER | ICLEI Local Governments for Sustainability

WinWind focus and objectives

Focus & Objectives:

- Identify and assess the **region-specific barriers** and **social acceptance problems** constraining market deployment;
- Evaluate **legal, institutional and political drivers** and **barriers** for social acceptance and support with a **special focus** on **procedural and financial community engagement**;
- Develop a **taxonomy** of social acceptance barriers and drivers in the target regions;
- **Increase knowledge** about **social and environmental impact of wind energy** including community benefits;
- Identify/assess **best practice policies and measures** and **novel governance mechanisms** including effective **procedural** and **financial community participation** and **engagement;**
- Analyse **critical success factors** of **novel governance mechanisms** of community engagement & assess the necessary conditions for their **transfer to other contexts**;
- Engage with **national and regional stakeholders;**
- Initiate a **transfer** of suitable measures and concepts between the partner countries and wind energy scarce target regions.

Factors affecting wind energy deployment WinWind theorethical framework



- WinWind uses a broadly recognised conceptual framework for different dimensions of acceptance
- The workflow of the project is based on the following steps:
  - Analysis of social acceptance drivers and barriers in the target regions
  - Good/Best practice analysis
  - Best practice transfer
  - Lessons learned and policy recommendations
  - In parallel to these, WinWind organises stakeholder dialogues in 6 country stakeholder desks, thematic workshops and stakeholder consultations

Source: Ferguson-Martin, C.J.; Hill, S.D. (2011): Accounting for variation in wind deployment between Canadian provinces. *Energy Policy*, 39, 1647-1658.

Patterns of conflict. Diminishing acceptance

- Hundreds of anti-wind initiatives established in recent years
- Similarities: Nature conservation concerns, health risks fears, cultural and landscape heritage
- Very different conditions

-> require different instruments

- difficult to separate suspicion of bribery or minority rights from other reasons of opposition or protest like ecology, aesthetics and national heritage
- There is a need for:

✓disentangle the different reasons for opposition in each country and region

✓seek to understand what kind of instruments may affect social acceptability related to each reason

- Opponents´motives extremely different.
- Perceived distributive injustice. Rural areas: modest conventional economic benefits (jobs, revenues); mostly rents for land owners
- Citizens' initiatives against RES getting professional
- Initiatives well networked and share methods to successfully block projects
- In DE joined together in the association "Vernunftkraft", questioning the energy transition and considering the nuclear phase-out a serious mistake
- Association speaks of 1,000 citizens initiatives
- This number is controversial, some experts consider approximately 500 citizens' initiatives for realistic
- Tone is becoming harsh. Lack of trust (developers, local councils, procedures)
- Populist parties try to ride the protest. AfD notes on its website that it supports the protest against wind energy (very active in East Germany, e.g. Thuringia, Saxony)

Barrier: Participation and involvement (procedural justice)

- Experience with local participation measures in Europe?
- Effective in preventing or responding to local opposition?
- Although most wind project developers seek to involve the public, few do this systematically and the level of activity is low in early project phases.
- Earlier and more systematic involvement of the public and stakeholders could reduce negative reactions in many energy development projects.

Barrier: trust/ mistrust

- Related to distributional and procedural justice:
- Local ownership; institutionalising compensation; transparency.
- Participation and involvement to satisfy minimum requirements?
- Trust highlights the complexity of social acceptance and the fact that social acceptance is produced at different levels.
- Trust in technology, science, institutions, public administration, developers, etc.
- Trust strongly correlated to socio-cultural factors

Empowerment of citizens and energy democracy high on the EU agenda

- 8 different legislative proposals launched by the EU COM in Dec 2016
- **Electricity Directive**, **Electricity Regulation**, **Renewable Energy Directive II, Governance Regulation** etc.
- EU recognizes a **universal right for citizens** to produce, store and sell RES-E free of any surcharges such as tariffs for grid connections.
- **Energy democracy** and **empowerment of citizens**
- Proposal for a Directive on common rules for the internal market in electricity (recast) COM/2016/0864 final/2)

- Art. 15: Active customers
- Art. 16: Framework for **local energy communities** which may engage in local energy generation, distribution, aggregation, storage, supply or energy efficiency services (definition, criteria, enabling framework)
- **Proposal for a Directive on the promotion of the use of energy from renewable sources (recast)**
- Art. 21: Renewable self-consumers
- Art. 22: Framework for **renewable energy communities** (definition, criteria, special provisions)

WinWind preliminary conclusions

- Evidence of impacts on the environment, economy and society not always conclusive, but *potential* and *perceived* impacts affect acceptance.
- Impacts are often context-specific.
- Local impacts and local responses vs. social impact
- Although not always conclusive on impacts, the experience of the six countries shows
  - Local impacts, whether real, potential or perceived, shape community acceptance
  - Since both opposition and support of specific projects is so firmly rooted in local community, knowledge about local impacts and local context key to understanding acceptance.
  - The way in which local impacts are perceived, and how they shape acceptance, depend on the processes surrounding wind energy development.
- Factors enhancing acceptability:
  - Distributional justice
  - Procedural justice
  - Trust

WinWind preliminary conclusions

- **Discrepancy** between **socio-political acceptance** and **local acceptance** →"*Social gap*"
- Diversity of influencing factors and different perceptions by different actors
- No panaceas
- Social acceptance is a multi-level problem
- NIMBY only partly suitable as an explanatory model
- Key overall influencing principles: procedural & distributive justice, trust
- Acceptance depends heavily on access to information, early involvement of affected populations and stakeholders, inclusiveness of the process and adequate financial resources of the community
- Informal / early participation processes are not the silver bullet, but could help to restore trust
- Local acceptance multi-layered and strongly dependent on location and context
- Compensation/community benefits are not a guarantee for acceptance

Preliminary findings for the target regions

- Need to support municipalities and residents by providing neutral information
- Important role of intermediary organisations including conflict mediators in achieving trust in planning and permitting processes (e.g. in Thuringia Service Unit Wind Energy, Competence Center Energiewende/ Naturschutz)
- Significance of representative projects involving citizens, highlighting local benefits and positively influencing public opinion
- Significance of communication strategies addressing the “silent” group of supporters in local communities and the group of undecided persons

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Increasing the acceptance of Wind Energy

Thank you for your attention!

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winwindproject.eu

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