

PUBLIC ACCEPTANCE AND LOCAL ENGAGEMENT

in Wind Energy Projects:
the Danish Experience



DEPARTMENT OF LAW
AARHUS UNIVERSITY

BIRGITTE EGELUND OLSEN

PROFESSOR PH.D. LL.M.

Head of Section

Research & External Funding

Director of Study

Master of Environmental & Energy Law

Vice Chairman

Energy Appeals Board

Chairman

Wind Turbine Valuation Authority

Legal Expert

Better and Simpler Legislation Project

Ministry of Environment and Food

AARHUS UNIVERSITY

School of Business and Social Sciences

Department of Law

M: beo@law.au.dk



au.dk



DEPARTMENT OF LAW
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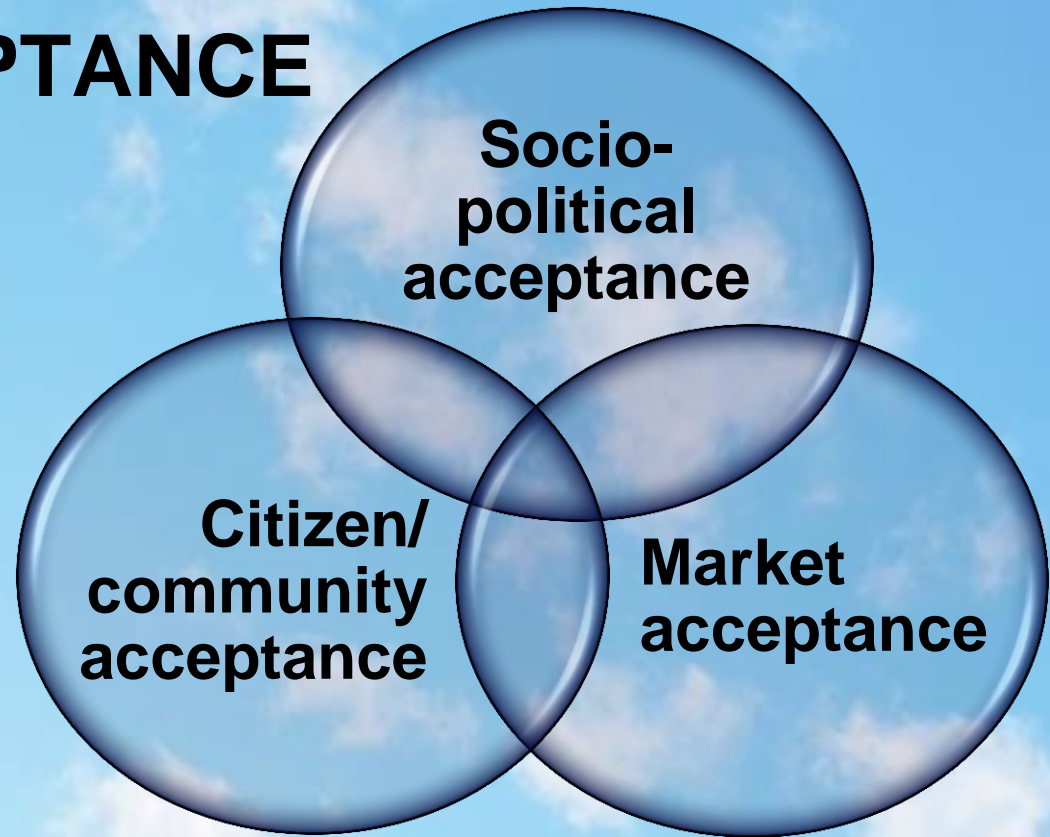
OUTLINE

- ▶ **Social acceptance as a concept:** Community and citizen engagement from a theoretical perspective
- ▶ **Local engagement in wind energy projects:** The Danish experience
- ▶ **Measures aimed at enhancing local acceptance**



SOCIAL ACCEPTANCE

(Wüstenhagen et al. 2007)



ARGUMENTS AGAINST-



JOE HILLER

CITIZEN/ COMMUNITY OPPOSITION

LEM KÆR WIND PROJECT

11 turbines 3MW Total height 150 m



Courtesy of Planenergi.dk

KEY FACTORS INFLUENCING LOCAL ACCEPTANCE WHEN IMPLEMENTING WIND PROJECTS



Visual and aesthetic impacts



Impacts on property or land-use



Impacts on nature



Distributional fairness



Environmental and health impacts



Trust and transparency

DISTRIBUTIONAL EQUITY

- ▶ **The fair sharing of the costs and benefits of wind energy projects**

Tool-box of incentives:

- ▶ **Ownership measures**
 - ▶ The Guarantee Fund
 - ▶ The Co-Ownership Scheme
- ▶ **Individual compensation measure**
 - ▶ The Compensation Scheme
- ▶ **Community benefit measure**
 - ▶ The Green Scheme



www.stilhed.eu

OWNERSHIP MEASURES

- ▶ Incentives to support the implementation of:
- ▶ Local citizen- or community ownership (The Guarantee Fund)
- ▶ Mandatory co-ownership (Option-to-buy-shares)

Partial
ownership

Divided
ownership

Joint
ownership

Full
ownership



THE GUARANTEE FUND (RE ACT SEC. 21)

- ▶ Financial support of local wind turbine owners' groups
- ▶ Aim: provide the security necessary for local cooperatives to obtain loans
- ▶ Scope: onshore projects and nearshore projects that follow a tender procedure
- ▶ Application procedure – competent authority: Energinet.dk
- ▶ Formal requirements:
 - ▶ The wind project is “viable”
 - ▶ The majority of the group members have “local affiliation” and “controlling influence” (min. 10 members)
 - ▶ Cover loans on “market terms”
 - ▶ Scope: “preliminary investigations of locations, environmental impact assessments or investigations of technical and financial aspects”

THE GUARANTEE FUND ... (CONT'D)

- ▶ Max. guarantee: ca EUR 67,000 per project (DKK 500,000)
- ▶ The Guarantee Fund has a fixed overall limit of ca EUR 1.4 million (DKK 10m) – corresponds to ca 20-30 guarantees
- ▶ Currently, ca EUR 185.500 (DKK 1,383m) have been depreciated - corresponds to 3 guarantees
- ▶ The guarantee lapses when a wind project is connected to the grid
- ▶ If a project is not completed and the guarantee has been called on, no repayment is required - unless the project is transferred



Courtesy of Vestas Wind Systems AS, Vestas.com

THE GUARANTEE FUND ... (CONT'D)

Does it work?

- ▶ Is the fixed limit of the Guarantee Fund too low?
- ▶ For a number of years no available funds – currently smaller amount available (too coincidental whether the guarantee can be achieved – no legal basis for a ‘waiting list approach’)
- ▶ Is the aim achieved? Does the scheme lead to increased acceptance?
- ▶ The idea was to support the ‘true’ local (grassroots) cooperatives, but do such even exist?
- ▶ No control mechanisms or means of subsequent monitoring in the current legal framework - merely a formal (‘black letter’) desk top decision prior to the actual granting of the loan

LOCAL CITIZENS' OPTION TO PURCHASE WIND TURBINE SHARES (RE ACT SEC. 13-17)

- ▶ The co-ownership scheme imposes an obligation on all new wind energy projects - onshore and near-shore - to offer a minimum of 20% ownership to local citizens (only private individuals)



- ▶ The co-ownership scheme is open to:
 - ▶ Citizens living less than 4.5 km from the site have a preferential right to purchase shares (max. 50 shares)
 - ▶ Citizens with a permanent residence in the municipality (or municipalities with a coast line within a 16 km from the nearest offshore wind turbine)
- ▶ Legal age: 18

THE CO-OWNERSHIP SCHEME ... (CONT'D)

- ▶ The private tender is conducted by the developer
- ▶ It has to be completed after the project approval but before the onset of grid connection
- ▶ Open for a period of at least 8 weeks
- ▶ The developer is obliged to prepare information on the nature and financial conditions - or a prospectus - accompanied by an audit report
- ▶ The tender documents are approved by Energinet.dk (TSO). The approval is a condition for obtaining a price supplement
- ▶ The approved tender documents are presented at public meetings
- ▶ Additional voluntary incentive for near-shore projects:
 - ▶ If at least 30% of the project is locally owned from the onset of grid connection, the wind project will receive an extra price supplement (DKK 0.01/kWh)



THE CO-OWNERSHIP SCHEME ... (CONT'D)

- ▶ The 'co-ownership shares' of a wind project are operated by an independent legal entity
- ▶ The forms of the co-ownership:
 - ▶ 20% ownership of the entire wind project
 - ▶ 20% ownership confined to a share of the wind project, i.e. certain wind turbines
- ▶ The 20% are based on the average electricity production expectancy over a 20-year period (not MW installed capacity)
- ▶ If the wind turbine is operated by a company with personal liability, the extent to which the company may incur debt must be stated in the company's articles of association

- ▶ Underlying principle: 'most favoured treatment principle'
- ▶ The co-owned shares may not rank lower than other shares or be subject to compulsory redemption
- ▶ Price calculation: Cost price
- ▶ Price estimate: EUR 400-530 (DKK 3-4,000)



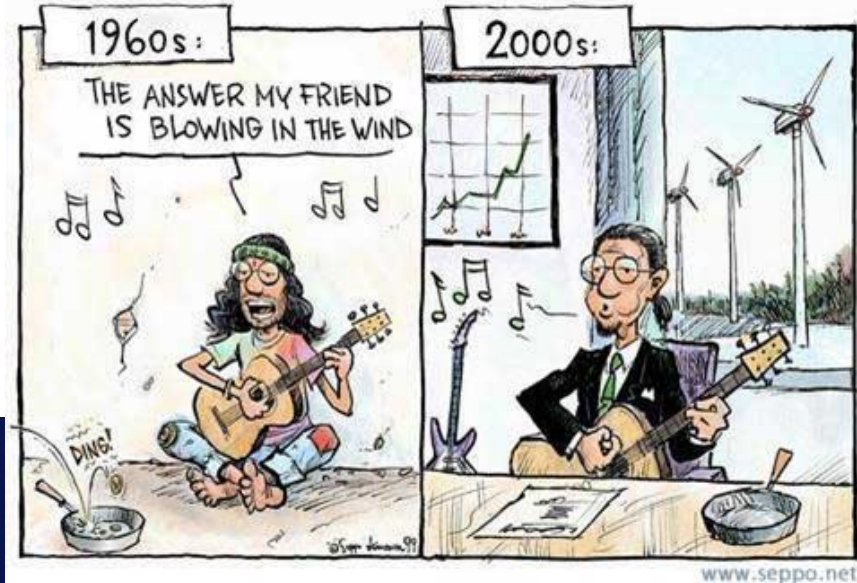
	Naboer 1 km	Naboer op til 4,5 km
20 % kabsorption via kaberefsordningen	X	X
Ekstra 10 % kabsorption fra Energi Fyn	X	
Sikkerhedsstillelse fra Energi Fyn for de ekstra 10 %	X	

Eksempel - 3 møller af 3 MW

- Estimeret produktion: 27.000.000 kWh.
- 27.000 anpartar af 1.000 kWh
- Estimeret pris pr. anpart: 3.500 kr.

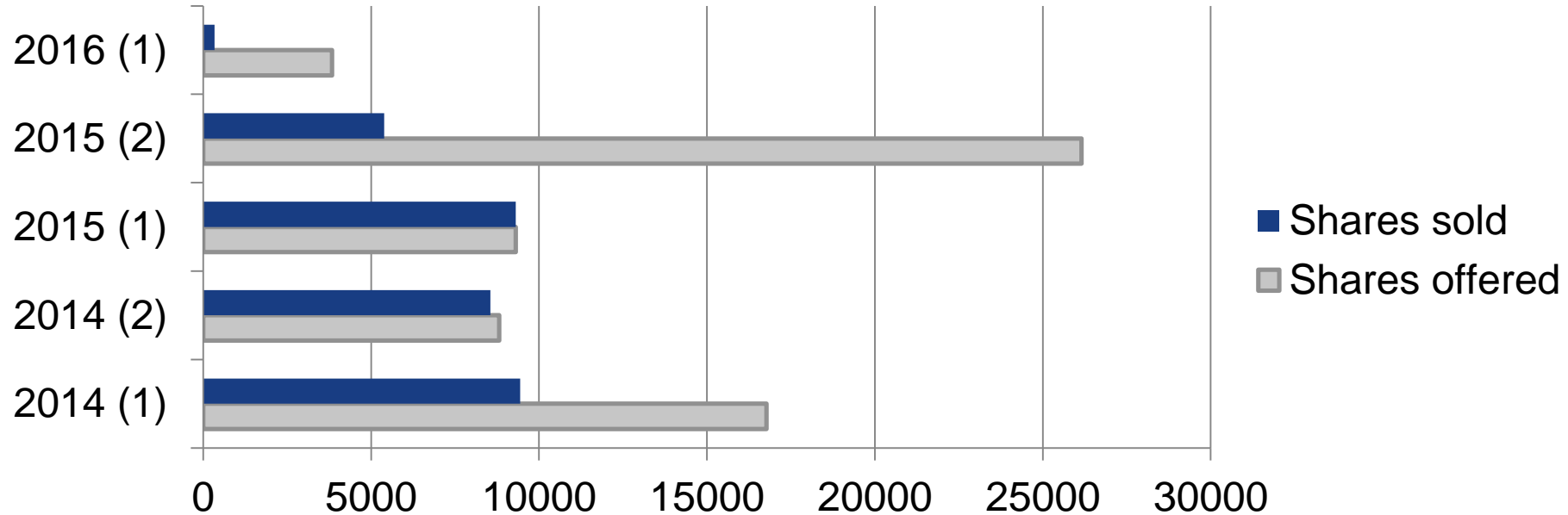
DOES CO-OWNERSHIP LEAD TO INCREASED ACCEPTANCE?

- ▶ It is said to stimulate local citizens' engagement
- ▶ Experiences show that there are often less opposition when local investors install the wind power (municipalities)



- ▶ But the scheme has not been a success in all cases
- ▶ The problem of professional investors
- ▶ The problem of 'wind energy nomads' – pro forma neighbors
- ▶ In some projects very few shares have been sold – currently massive problems primarily due to low electricity prices
- ▶ An in-built conflict with the interests of the developer
- ▶ The return of non-sold-shares may trigger 'creative thinking' e.g. when establishing the separate legal entity for the co-owned shares

LATEST DEVELOPMENT IN SHARES OFFERED FOR SALE AND SHARES SOLD



COMPENSATION FOR LOSS OF VALUE TO DWELLINGS (RE ACT Sec. 6-12)

- ▶ Imposes an obligation to compensate neighbors for loss of value to their dwellings
- ▶ $\geq 1\%$ then full compensation
- ▶ Covers onshore projects, off-shore open door projects and near-shore projects subject to a tender (also testing turbines)



- ▶ The size of the loss of value determined by impartial valuation authority
- ▶ The duty of the developer to pay the compensation (and administrative expenses)
- ▶ Criteria for calculating the loss of value
 - ▶ Characteristics of the area
 - ▶ Visual interference and distance to turbines
 - ▶ Estimated level of nuisances: Noise (low-frequency) and shadow flickers
 - ▶ Property value and type
 - ▶ Contributory fault may reduce compensation

COMPENSATION SCHEME STATISTICS: AVERAGE LEVEL OF COMPENSATION

▶ 2009-2015:

- ▶ Number of decisions: 1033
- ▶ In 61.37% of the cases compensation has been granted
- ▶ In total 678 properties/dwellings corresp. to EUR ca 11,5m (DKK 82,5m)
- ▶ Average level of compensation EUR ca 16,500 (DKK 122,000)
- ▶ **Average level of compensation as a percentage of the property value: 7,44%**

▶ 2009-2013(June):

- ▶ Compensation granted: 445 properties corresp. EUR ca 7,2m (DKK 53,5m)
- ▶ Average level of compensation EUR ca 16,000 (DKK 120,000)

▶ 2013(July)-2015:

- ▶ Compensation granted: 292 dwellings corresp. EUR ca 3,9m (DKK 29m)
- ▶ Average level of compensation EUR ca 16,700 (DKK 125,000)

DOES THE COMPENSATION SCHEME LEAD TO AN INCREASED ACCEPTANCE?

- ▶ It may give indulgences to local governments for making ‘unpopular’ decisions – speed up the project planning process
- ▶ However, avoid a bribery approach!
- ▶ The size of the compensation is of some importance
- ▶ Immense difficulties of adapting expectations
- ▶ An increased focus on the nuisances
- ▶ Confused expectations: Not the nuisance as such, but the impact on property values



LEGAL PROCEEDINGS: 2009-2016(JUNE)

Case law on the compensation scheme:

Ca 3% of the decisions are taken to court (33 District Court cases)

High Court decisions: 5 cases

The assessment data
was not correct

- Lem Kær (Engholmvej 3)
- Bindsbøl

The High Court
disagreed with the
Valuation Authority

- Lem Kær (Nygårdsvej 9)
- Vester Barde
- Ørnhøj



COMMUNITY BENEFIT SCHEME

(THE GREEN SCHEME - RE ACT SEC. 18-20)

- ▶ Subsidy scheme to support:
 - ▶ Construction work to enhance local scenic and recreational values, and
 - ▶ Cultural and information activities in local associations to promote RES-acceptance
- ▶ The subsidy is payable when the turbine is connected to the grid
- ▶ Calculating the subsidy: 0.05 cent per kWh for 22,000 peak-load hours for each turbine (a 3 MW turbine entails an amount of ca EUR 36,000)
- ▶ Competent authority: Energinet.dk – applications are forwarded by the municipal councils
- ▶ Examples: bicycle paths, nature restoration projects, renovation of sporting facilities and community houses, instalment of renewables in public buildings, local renewable energy workshop etc.

THE DANISH EXPERIENCE OF REGULATING LOCAL ACCEPTANCE OF WIND ENERGY

Early citizen engagement
"Phase 0-involvement"

Regulation of nuisances
e.g. noise standards



Strategic planning
SEA-involvement

Project planning
EIA-involvement

RE Act: specific local acceptance measures

FURTHER READING:

BIRGITTE EGELUND OLSEN

- ▶ Community Energy in Denmark (2016) *Energiewende und Partizipation – Transformationen von Gesellschaft und Technik*, L. Holstenkamp & J. Radtke (eds.), Springer (forthcoming)
- ▶ Renewable energy: public acceptance and citizens' financial participation (2016) *Encyclopedia of Environmental Law*, D. Farber & M. Peeters (Eds.) Edward Elgar Publishing
- ▶ Local acceptance and the legal framework – the Danish wind energy case (2014) *Sustainable Energy United in Diversity – Challenges and Approaches in Energy Transition in the European Union*, L. Squintani and H. Vedder with M. Reese and B. Vanheusden (Eds.) *European Environmental Law Forum Series, Volume 1*, p. 137-156 (co-author: Helle Tegner Anker)
- ▶ Regulatory financial obligations for promoting local acceptance of renewable energy projects (2014) *Renewable Energy Law in the EU: Legal Perspectives on Bottom Up Approaches*, M. Peeters & T. Schomerus (Eds.) Edward Elgar, p. 189-209
- ▶ Wind Energy and Local Acceptance: How to get Beyond the NIMBY Effect (2010) *European Energy and Environmental Law Review*, Kluwer Law International, p. 239-251



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