



Task 28 within IEA RD&D Wind

Social Acceptance of Wind Energy Projects

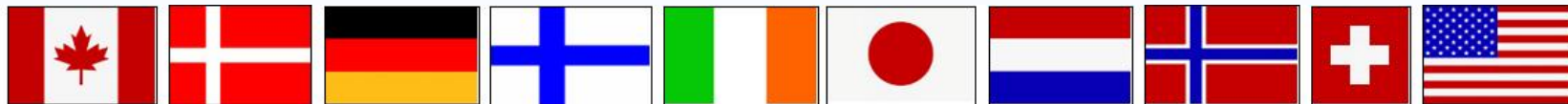
“Winning Hearts and Minds”

March 16th 2011

IEA Wind side event at EWEA 2011

Eric Lantz, NREL

For Robert Horbaty, ENCO Energie-Consulting AG



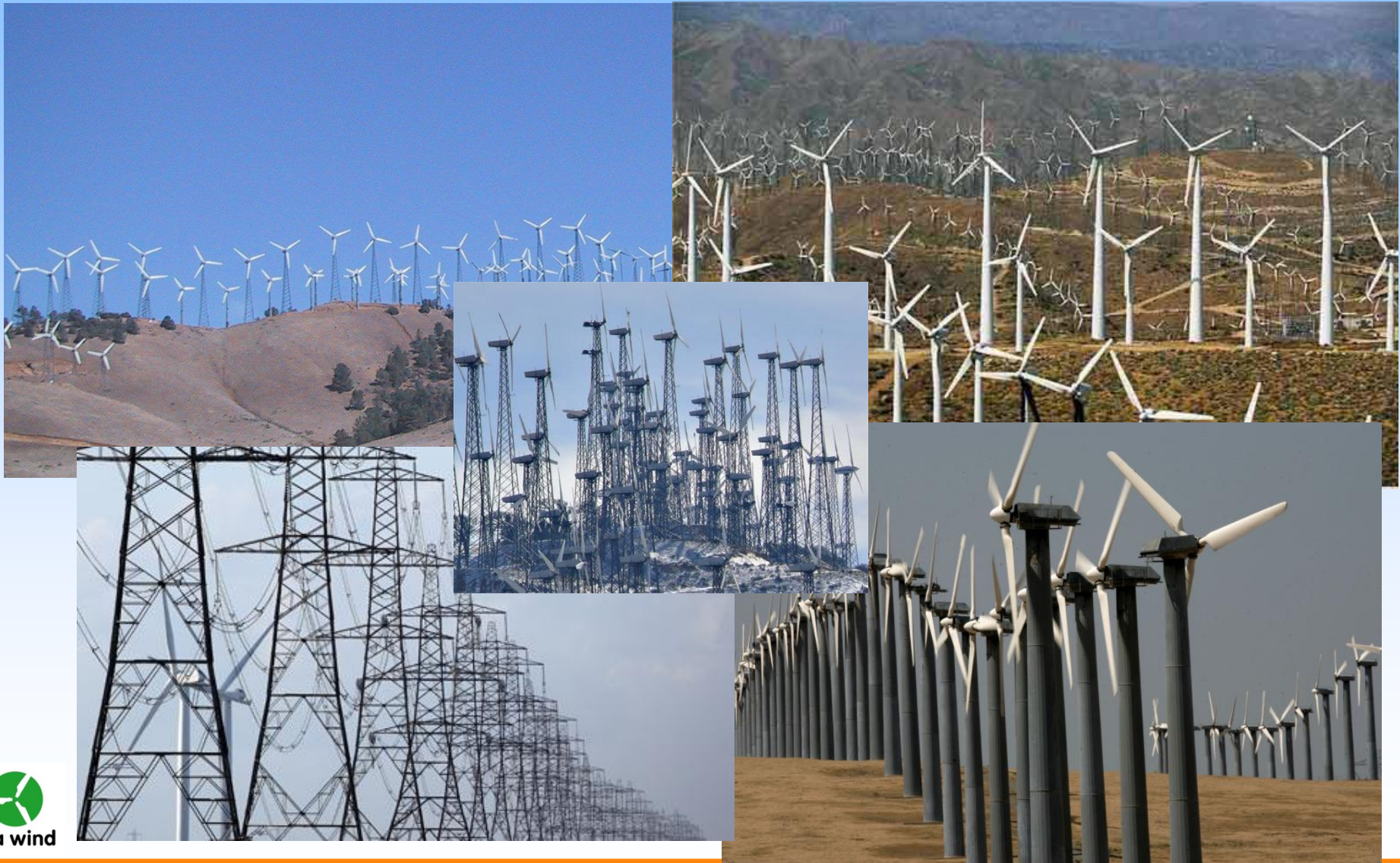


Efficacy and Economy





Crowded Landscapes





Wildlife: Birds & Bats





Turbine Proximity to Residences





Health, Safety, Nuisance, and Annoyance





Social Acceptance: Issues

- **General support is high but:**
 - Strong local resistance can generate animated community debates
 - Opponents are often well organized and funded
 - Coordination among groups via the web and other social media





Social Acceptance: Issues

- **Social acceptance may be a significant barrier to renewable energy policy goals**
 - Wind energy has new and different impacts on landscape
 - Low energy density
 - Moving element
 - New industrial infrastructure in rustic, rural locations



Past experiences in hydro, nuclear, transmission, and wind energy provide knowledge and lessons learned

→ Good practices already exist!







IEA Wind Task 28: Background

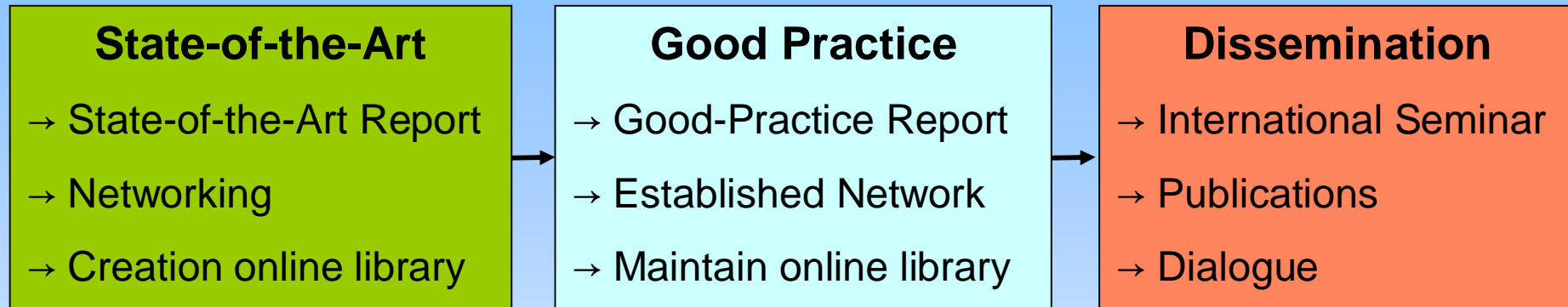
- **International working group**
 - Collect and exchange knowledge, disseminate good practices → accelerate realization of wind energy potential
 - Embedded in IEA Implementing Agreement for Co-operation in R&D of Wind Energy systems
 - Participating countries from Europe (7), North America (2) & Asia (Japan)
 - Experts from various disciplines (planners, engineers, sociologists, psychologists, environmental scientists)



Cross-country & Interdisciplinary Approach



Task 28: Work and Goals



- **Outcomes**

- Establishment of international forum
- Translate research results of social scientists into language of planners and engineers
- Reports (State-of-the-Art, Good Practice)
- Tools, Guidelines, Seminars, Publications...





Elements of Social Acceptance

Well-being

- Standard of living
- Quality of life
- Health, lights, noise & shadow flicker
- Valuation of ecosystems

Policy & Strategies

- National framework incentive programs
- Spatial planning
- Local implementation policy

Procedural design

- Regulatory requirements
- Fair and transparent processes
- The role of public engagement
- Provisions for cultural history / local context

Distributional justice

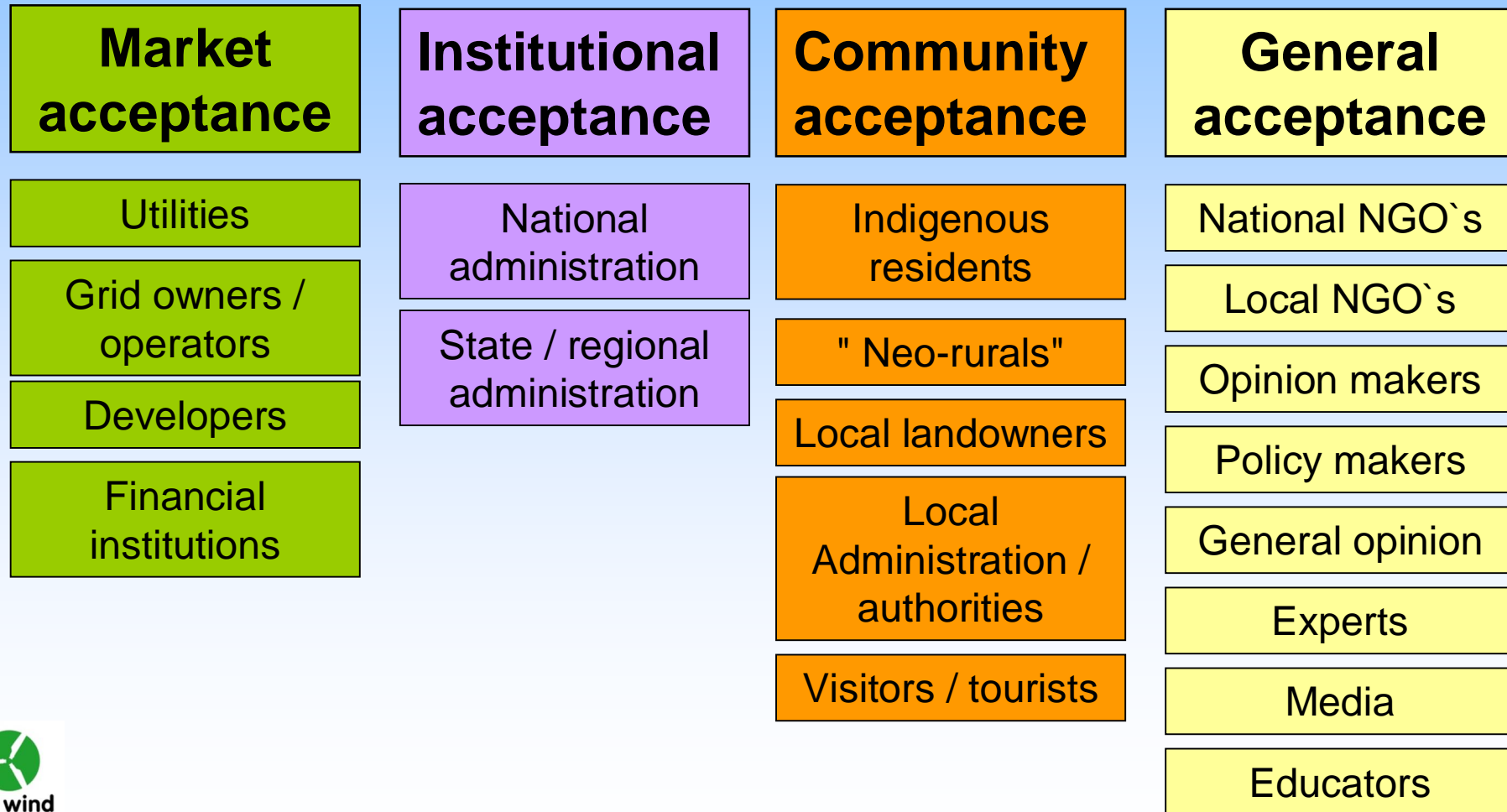
- Ownership models
- Regional welfare
- Creation of win-win-situations

Implementation strategies

- Visualization
- Social marketing / communication
- Checklists / guidelines
- Practical application of scientific results



Stakeholder Framework



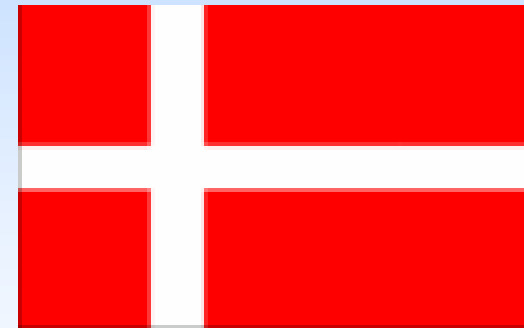


Results: Policy & Strategy

An overarching framework and with policies that facilitate local implementation can help to mitigate opposition

- **Good Practice Example: Recent Danish Policy (2008)**

- Introduced range of issues to help implementation of national targets
 - Local option for share purchase
 - Green scheme to enhance local scenic/recreational value
 - Fund to support early stage development
 - Wind Turbine Secretariat
 - *Compensation for loss of property value*

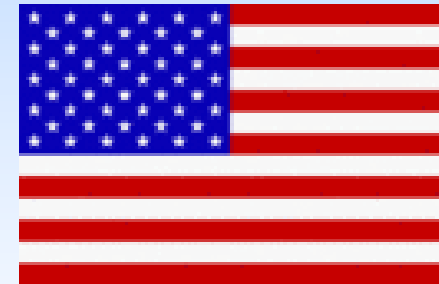




Results: Well-being / Standard of Living

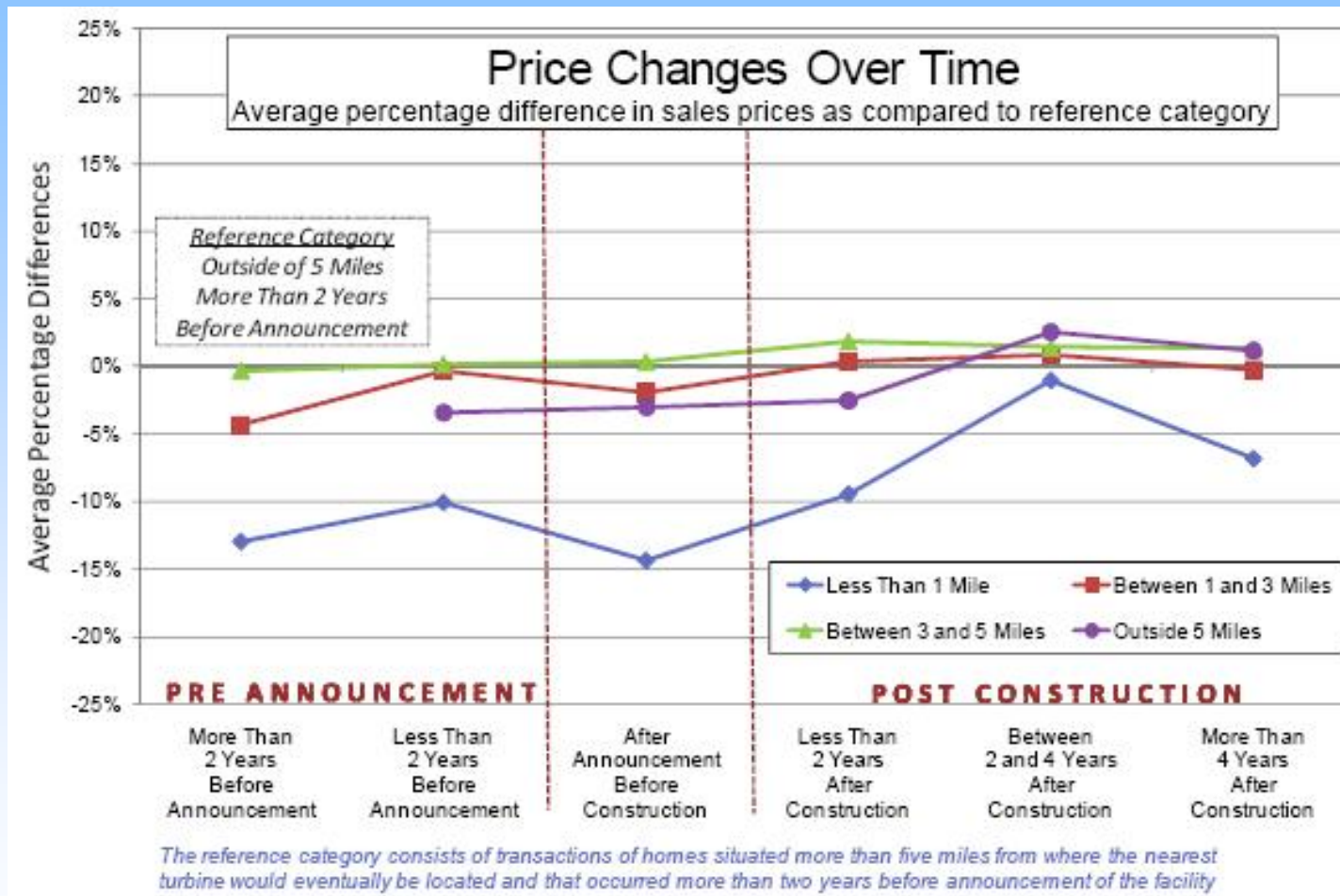
Perhaps the single largest factor in local/community acceptance

- **Significant concern persists over basic nuisance issues**
 - e.g., noise, aesthetics, shadow flicker
- **Well-being also concerns standard of living**
 - Impacts of wind energy on electricity rates
 - Tax income, job creation, business activity
 - Fear of home-price depreciation
- **Well-being influenced by personal attitudes**
 - Environmental issues
 - Place attachment
 - Feeling towards the developer or local authorities





Results: Well-being / Standard of Living



Temporal Aspects Model Result: Area and nuisance stigma

Source: Hoen et al. 2009; The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis





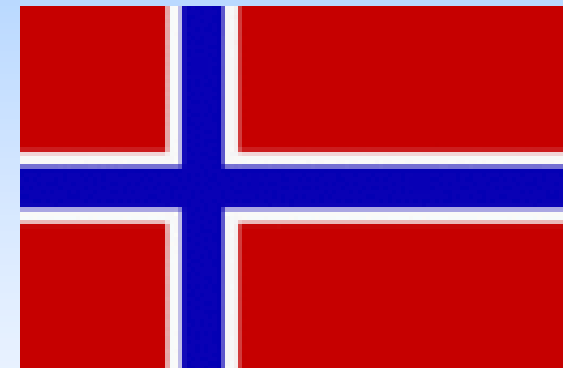
Results: Well-being / Standard of Living



Valuation of Ecosystems

New knowledge generation & communication is important

- **Need to:**
 - Continue research and data collection
 - Develop mitigation measures
 - Address issues at an early stage
 - Maintain a dialogue between science and society

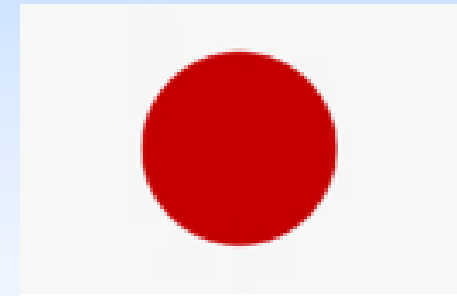




Results: Distributional Justice

Local residents often bear a disproportionate share of wind energy's impacts

- **Broad-based sharing of benefits may alleviate some concerns of injustice**
 - Positive appreciation of costs and benefits
- **"Community wind" in Japan**
 - Mobilization of people & capital all over the country
 - Identification with projects (e.g. with names on turbine)
 - Results in greater economic and other benefits





Results: Distributional Justice



Good Practice Example “Social Innovation”

- Offers investors opportunities for
 - Socially responsible investment
 - Certification card
 - Name of investor on the tower
 - Direct participation in the project
- Impacts local economics
 - Direct and indirect economic returns
 - Project revenues
 - Jobs, general business activity
 - Visitors/tourism
 - 300-750 investors for each project; 90% of them have visited or intend to visit the sight.
- Creates new social networks





Results: Procedural Design

Fair process can turn affected people into involved parties

- **“NIMBY” does not explain the nuances of project opposition**
 - Resistance is often not project wide, but focused on specific issues (e.g., setbacks)
 - Procedures which create dialogue across stakeholder groups can assist in resolving specific issues
- **Procedures and regulations are best when they consider local context**
 - Wind energy issues may bring forward divides / cleavages in local communities
 - Local history, experiences and structures must be taken into account



Results: Procedural Design

- **Guidelines**

- Independent assistance may be needed for local government to fairly evaluate individual projects
- A third-party intermediary may facilitate discussion among a diverse stakeholder group
- Developer and community expectations must be established publicly
- Procedures must create space for compromises → debates, public assemblies and forums





Results: Implementation Strategies

Entrenched opposition may be impossible to overcome; poor project implementation may also affect future success

● Trends

- Public relations planning is a necessity, in some places
- Open and transparent communication throughout development is critical
- Broad based education helps potential host communities understand why a given project is important

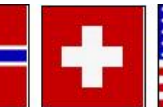
● Good Practice Examples

- U.S. use of community based social networks
- Japan community based “Wind Turbine Landscape Contest
- Canada, Finland, U.S. and others have publicly funded education programs that focus on schools



iea wind

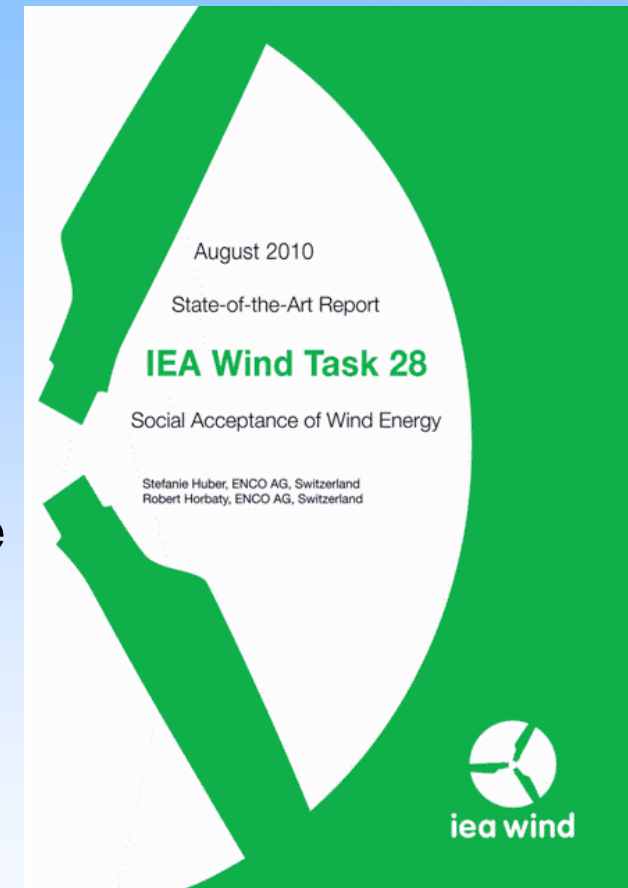
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Task 28: Current Status

- **State-of-the-Art Report** (published)
 - Today's knowledge on Social Acceptance of wind energy
 - Basis for further work on Good Practice and Dissemination
- **Good Practices** (work in progress)
 - Description of issues of social acceptance
 - Recommendations with justifications
 - Examples
- **Dissemination** (work in progress)
 - Country specific expert meetings
 - Side events at conferences
 - Publications



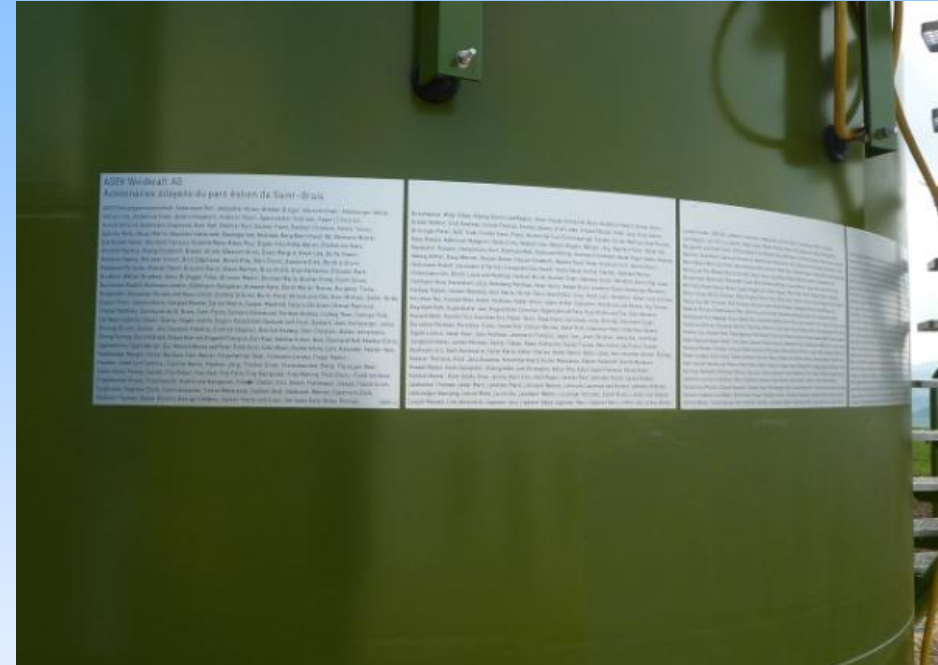
www.socialacceptance.c

Website includes extensive database of articles and projects





Task 28: Successes



Idea of name inscription copied in Switzerland from Japan

“We have doubled the value of knowledge by sharing”

Yasushi Maruyama, Task 28 Representative





Thank you for your attention!

IEA Wind Task 28

Eric Lantz, NREL

For Robert Horbaty ENCO Energie-Consulting AG

www.socialacceptance.ch

Notice: The IEA Wind agreement, also known as the Implementing Agreement for Co-operation in the Research, Development, and Deployment of Wind Energy Systems, functions within a framework created by the International Energy Agency (IEA). Views, findings and publications of IEA Wind do not necessarily represent the views or policies of the IEA Secretariat or of all its individual member countries.

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