



IEA WIND TASK 28

SOCIAL ACCEPTANCE OF WIND ENERGY PROJECTS "Winning Hearts and Minds" STATE-OF-THE-ART REPORT Country report of Switzerland

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Framing the issue

0. Introduction by the Operating Agent of IEA Wind Task 28

In 2009, many governments and organizations set new targets for CO₂ reductions, renewable energies in general, as well as specific targets for wind energy deployment. All these targets require many single projects to be carried out both onshore and offshore that necessitate hundreds of siting decisions and therefore hundreds of communities accepting a wind project nearby.

Research and projects are ongoing in many countries on how acceptance could be fostered, but we need to look beyond national borders to learn from each other and to complement each other's approaches. While Denmark has one of the longest traditions of co-operatively owned wind farms, Japan may bring its expertise in generating additional benefits for the communities hosting the turbines. While Ireland and Canada know about the effects of wind parks on tourism, Norway has conducted actual research on communication between society and science, e.g. concerning bird risks with wind farms.

In the framework of the IEA Wind Implementing Agreement, Task 28 collects and disseminates the current knowledge on how to increase acceptance of wind energy projects with the aim of facilitating implementation of wind energy and climate targets.

Ten countries have officially committed to Task 28 and have provided an input for cross-national comparison and discussion by writing a national report such as the one on hand. The Swiss report has been incorporated into the international State-of-the-Art Report by IEA Wind Task 28, available also on www.socialacceptance.ch.

1. Definitions

a. Large Scale / Small Scale

Several definitions for "small" and "large" wind turbines exist in Switzerland:

1. according to annex 1.3 of the ordinance of energy (Energieverordnung EnV) a turbine with a rated power up to 10kW is "small". A turbine with a rated power of more than 10kW is a "big" turbine.
2. In the "Recommendations for the planning of wind energy projects" [BFE_2], issued by the Swiss Federal Offices of Energy, of the Environment and of Spatial Planning, a turbine with a total height of up to 30m is considered as "small".
3. The spatial planning and the process of granting a building permit for wind energy projects is located on the regional – and not on the federal – level in Switzerland. In their spatial planning schemes, some regional authorities have given their own definitions of "small" wind turbines. These definitions are mostly related to the total height of the turbine.

Industry Status and Stakeholders

2. National Wind Energy Concepts

In 2004 the Swiss Federal Offices of Energy, of the Environment and of Spatial Planning have published a “Wind Energy Concept for Switzerland” [BFE_1]. Due to the developments in the fields of wind power technology, of regional spatial planning schemes and of the economical framework, this concept is now outdated. As a follow up document, the three Federal Offices have published “Recommendations for the planning of wind energy projects” in March 2010.

a. Policies and strategies for wind energy

The development of wind energy is part of Switzerland's energy policy which aims for a sustainable energy supply in the long term. The federal energy act (Energiegesetz EnG) sets a goal of rising the production of renewable electricity by 5.4 TWh from the year 2000 to the year 2030, which corresponds to 10% of the total electricity consumption. As an intermediate step, wind energy has to contribute 600GWh until 2020.

b. Incentive programs for wind energy

As a means to meet the goals for renewable electricity, Switzerland has started a Feed-in Tariff (FIT) System in 2008. Producers of renewable electricity can apply for a FIT, which is granted for a duration of 20 years. There are no ecological or social conditions to be met for to get the FIT. The FIT for wind energy is considered to be too low to have a profound effect on the wind energy market in Switzerland.

c. Spatial planning

Spatial planning of wind energy projects is done on the regional level in Switzerland. At the end of 2009, most regional authorities are in the process of including wind energy in their planning schemes or have already done so. These planning schemes may include or exclude dedicated sites or areas for wind energy, guidelines and criteria for the location of wind energy sites, or all of it.

d. Strategies: From policy to local acceptance

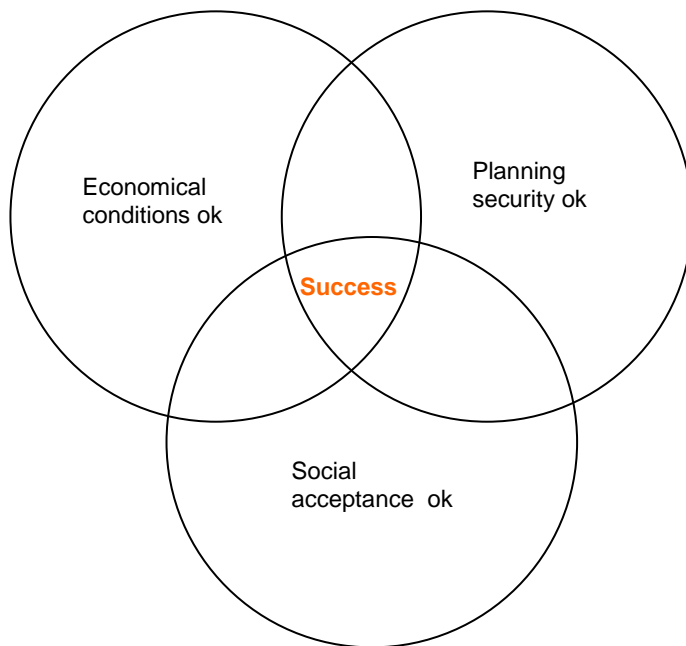
In the process of developing a planning scheme for wind energy, regional authorities consult stakeholders like the national wind energy association and environmental NGOs. We consider this consulting process as a first step in securing social acceptance for the future wind energy projects.

Consulting the main stakeholders is an integrated part of the development of a spatial planning scheme. This is a main reason why the Federal Offices of Energy, of the Environment and of Spatial Planning emphasize the need of spatial planning schemes for wind energy in their “Recommendations for the planning of wind energy projects” [BFE_2].

The International Energy Agency Implementing Agreement for Co-operation in the Research, Development, and Deployment of Wind Energy Systems



With the FIT system the economical base for wind energy projects should be ok. With the integration of wind energy in the regional planning schemes, a minimum of planning security for wind project developers is given as well. Both conditions are necessary for the development of wind energy, but they are not sufficient. Social acceptance on the project level is the third condition to be fulfilled. The Swiss Federal Office of Energy closely collaborates with the Swiss Wind Energy Association "Suisse Eole" to enhance and secure a high level of social acceptance of wind energy projects:



3. Stakeholders / target groups

a. Utilities / grid owners

In the past years utility companies have been the main drivers of wind energy development in Switzerland. Their main concern is to fulfil their customer's demand for green electricity products at a reasonable price. Most utility companies have strong regional bonds which helps them to enhance social acceptance for their wind energy projects as long as they are located in their home regions [Schmid]. Utilities do not require a high return on investment.

b. Developers / investors

There is a number of independent developers along with development companies owned by utilities. Utilities are the main investors in wind energy projects.

c. Financial institutions

We have not found financial institutions to play a major role in financing wind energy projects in Switzerland. For them the economical performance of wind projects in Switzerland is too poor and the building permission process is too long and too risky compared to other European countries [Bürer].

d. National opinion makers, policy makers and general opinion

On the national level environmental NGOs play a major role as opinion makers. We have found two different opinions toward wind energy among them:

- The Swiss Foundation for Landscape Protection strongly opposes the development of wind energy in Switzerland. The SFOE and the wind energy association have made several attempts to establish a constructive dialogue with the landscape protectors but did not succeed.
- Environmental NGOs which are oriented towards protection of nature, e.g. fauna and flora, have entered the dialogue process with the wind energy association. Chances are good there will be an accord how to develop wind energy while still protecting nature.

e. Educators

No information available

f. National, regional and local administration

Within the national administration the three Federal Offices of Energy, of the Environment and of Spatial Planning have established a common base how to develop wind energy in Switzerland : « Concentration of large turbines at appropriate sites ».

Most regional authorities (Fachstellen der Kantone) support the development of wind energy provided that there will be no major environmental impacts. This is reflected in the way their spatial planning schemes treat wind energy.

g. Local population

Local population is in general indifferent towards wind energy projects. It is susceptible to well organized local and/or national "pressure groups" which mostly oppose the projects. Among these opponents we often find owners of secondary homes and landscape protection organisations [Schmid].

h. Visitors / tourists

No information available. Since tourism plays a major role for Switzerland's economy, it would be interesting to investigate the impact of wind energy projects on tourism.

Variables Influencing Social Acceptance

4. Well-being

a. Standard of Living, Quality of Live and Health

Wind energy supporters often emphasize the enhanced independence of energy (“Energieautonomie”) a wind energy project will bring to the local community. In fact there is no real independence of energy, even if a wind farm would produce more than the local energy demand. Nevertheless, to relate the production of a wind farm with the local demand can enhance its social acceptance by giving a notion of growing independence to the locals.

b. Dynamic of regional identity, place attachment

Wind energy projects do alter the perception of the site where they are constructed. With this notion in mind, it can be possible to create a new identity of the place based on its original identity [Leuzinger].

c. Valuation of ecosystems

Experience shows that the protection of birds (and bats) is of crucial importance for the social acceptance of wind energy projects. There is a large network of bird protection groups in Switzerland and birds seem to be of a high emotional value to many people.

Discussions with regional authorities and environmental NGOs have shown that there is a strong will to keep natural areas, which are part of national lists of protected objects, free of wind turbines.

5. Distributional justice

a. Distributional justice

Very important. Experience shows that perception of distributional fairness has strong local ties. Models that work in one place may not work in another place. We have witnessed the phenomenon that locals do not like the selling of the “their” wind energy production as green certificates to “far away cities”.

On the other hand we see a race between developers to secure promising sites by granting unreasonably high cash payments or other values or services to land owners or communities. This is presented as some kind of “goldrush” in the newspapers and adds a dirty touch to wind energy projects.

b. Ownership model

No information available. Would be very interesting to compare different models.

c. Welfare

No information available.

6. Procedural Design

a. Procedural design

The recommendations for the planning of wind energy projects [BFE_2] emphasize the need to treat wind energy in regional spatial planning schemes. This way the participation of the stakeholders is secured on a minimum level.

The SFOE has started a project called “Code of Conduct for Wind Energy Projects” which aims to develop some kind of standard how stakeholders should interact. In a preceding feasibility study a large majority of the stakeholders voted in favour to develop such a “Code”. Most of them actually participate in the project which is organised in workshops, where stakeholders meet and discuss various instruments and approaches. In the time between these workshops, a small group of experts in communication and procedural design shape the stakeholder’s inputs into proposals for the following workshop.

The project started very successfully with a large number of participants. Unfortunately some stakeholders – mainly investors and developers – have left the project as soon as it became clear that they would not find any quick results. At present there are two instruments in development:

- a code of conduct for the wind energy sector as a whole, where investors, developers and environmental NGOs agree on guidelines how to proceed and interact.
- a code of conduct on the project level where investor, developer and local stakeholders agree on guidelines how to proceed and interact.

b. Communication strategies, public consultation

The first public opinion poll on wind energy dates from the year 2002. Of the 420 people polled,

- 89% wanted wind energy to be developed in Switzerland and
- 75% think it is no problem for them to live in the vicinity of a wind park

While these results look very positive, we must keep in mind that in 2002 there were only eight turbines with a rated power of more than 100kW installed in Switzerland. Most people polled hadn’t ever seen a wind turbine at this time in Switzerland.

In October 2010 the authorities of the Canton of Neuchâtel - which has one of the most important wind resources in Switzerland - has polled a representative sample of 802 residents about their opinion on energy efficiency and renewable energy issues:

- 69% want the Canton of Neuchâtel to achieve “energy independency”, i.e. the amount of energy consumed shall be produced inside the canton’s borders. These 69% think it will take 17 years on average to achieve energy independency.
- 93% want to develop Wind energy in the Canton of Neuchâtel (*PV: 97%, Heat pumps: 93%, Hydropower 87%, Wood-fired heating: 86%, Biofuels/Biogas: 74%*).
- 73% do NOT think wind turbines will degrade the ridges of the Jura mountains.
- 70% do NOT think the impact of wind turbines on the environment is too heavy compared with their energy production.

Besides the very broad approval of all renewable energies, the explicit support for the development of wind energy in the Canton of Neuchâtel is remarkable and encouraging.

7. Implementation Strategies

a. Checklists, guidelines: conclusions from existing examples

There is a number of publications serving as guidelines for developers, investors and authorities. Most of them have been initiated and supported by the SFOE:

- The Wind Energy Concept for Switzerland [BFE_1]
- "Security of Wind Energy Installations"; a guide treating both technical and economical risks [BFE_3]
- "Wind Energy and the Hydropower in Switzerland"; a study showing opportunities for hydropower storage plants in Switzerland in a grid with a increasing demand of balancing energy [BFE_4]
- A guideline and checklist for investors when dealing with environmental issues in the planning process [BFE_5]

By issuing these guidelines, the SFOE aims to enhance the quality of wind energy projects and thus to increase social acceptance of wind energy in Switzerland.

Summary and Conclusions

8. Conclusions

a. What we know already

Social acceptance is crucial 1) for the development of wind energy on a general level, i.e. to attain our national goals and 2) for the realisation of a wind energy project within a reasonable timeframe, i.e. for investor's security.

The major stakeholders have been identified over the past years. While we still face a strong and well-organized wind energy opposition, wind energy supporters have gained momentum especially among environmental NGOs and utility companies.

The stakeholder participation guaranteed by existing planning procedures is not sufficient.

A number of distributional models is known among developers and investors. Still distributional fairness is not fully understood.

b. What needs to be done yet

Better understanding of distributional and procedural fairness, what does it mean for different stakeholders? How to improve it? What are the appropriate instruments?

9. References

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