

Development and financing
of a citizen's wind farm
(Bürgerwindpark)

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Europe

Bohmstedt



Profile of the village of Bohmstedt

- 750 inhabitants, 1.200 hectares
- economy:
 - agriculture (15 farms),
 - tourism, trade firms,
- 1998 : erection of 9 wind turbines à 600 KW
annual power production: 11 Mio. KWh/p.a.
= electricity for 3.000 households
investment: 5,0 Mio. Euros, 30 shareholders

1. Fundamental problems of wind farms

- wind turbines change the landscape
- wind turbines cast a shadow and make noise
- acceptance problems as a natural result
- citizens are for renewable energies –
„but not in my neighbourhood!“

2. Solution of the acceptance problems

- creation of a win–win–Situation:
environment, inhabitants und municipality profit
- wind farm construction in personal control, because of this no clash of interests between project developers and owners will occur
- inhabitants´ participation in the wind farm in the form of private economic ownership
- value added in the village/region on as many levels as possible

3. Characteristics of a citizen's wind farm

- with a citizens' wind farm the people living in the village or region are involved in conceiving, financing and organising the project;
- regional basis = local/regional inhabitants are owners and shareholders;
- transparency of contractual foundations and regular decisions as basis of the business;
- self-organised management by the citizens or under their exclusive control.

4. Realization of a citizen's wind farm in practice

4.1. Principles and objectives

- planning by local persons of good reputation
- topmost objective: no profit out of planning and constructing the wind farm but out of its operation
- further objective: „open books“ with planning, constructing und operation, transparency of any event
- management compensation being fixed by decision of the company

4. Realization of a citizen's wind farm in practice

4.2. First steps to realisation

- determination of the wind farm's size
example: 5 turbines à 2 MW, 100 m hub height
- taking possession of the turbine-sites
- clearing up the power feed to the grid
- permit approval to be settled with the authorities
- commissioning the wind assessment
- partnership agreement, foundation of the company

4. Realization of a citizen's wind farm in practice

4.3. Assessment of the amount of investment

example: 10 MW nominal power → 10 Mio. €

additional costs (foundations, grid connection,
planning, financing, liquidity reserve) → 3 Mio. €

total: 13 Mio. €

so: 1,3 Mio. Euro per MW nominal power as real
manufacturing costs

4. Realization of a citizen's wind farm in practice

4.5. construction of the financial-model

planning of income and expenditure over 20 years
incl. taxes

4.6. providing the bank loans

- project-presentation to the bank;
- settling of the financing conditions
- request for credit

4. Realization of a citizen's wind farm in practice

4.7. attracting share capital (1)

- publicity for share capital
- share capital = owners of the wind farm
- share capital = determines further decisions
- Problem: who finances preliminary costs up to the financial close (FC)?

past: the project developers; they sometimes bathed in gold when selling the development

new: the citizens themselves by founding a project company at the start of planning

4. Realization of a citizen's wind farm in practice

4.7. attracting share capital (2)

- procurement of share capital in two steps:
 - a) risk capital at the beginning 10 % → 0,2 Mio. €
to be used for preliminary costs
 - b) increase to 100 % at FC → 1,8 Mio. €
- total: **2,0 Mio. €**
- only subscribers of risk capital in phase a)
may join in phase b)!
- worst case: if project fails risk capital will be lost

4. Realisation of a citizen's wind farm in practice

4.8. Realisation of share capital procurement

- from the beginning open and transparent information to all inhabitants of the village
- creation of enough shares for all the inhabitants, regardless of income or property
- ideal: everyone becomes a partner with one share
- tender for shares of small amounts
- share-offer also for minor children (via parents)
- if not enough shares available: circulating procedure: everyone may buy one more share

4. Realization of a citizen's wind farm in practice

4.9. Example:

- demand for share capital € 2.000.000
- of that for planning now 10 %: € 200.000
- offer: 400 shares à € 5.000 to be sold
payment now 10 % = € 500 / share
- maximum risk: € 500 / share until construction
- result: allocation to many persons

Together one is strong!

4. Realisation of a citizen's wind farm in practice

4.10. citizen's wind farms' advantage of net yield

- manufacturing costs of a classical wind farm:
about 16 Mio. €
- renunciation of projecting profit up to
10 – 30 % (depending on the site), e.g.: 3,0 Mio. €
- result: less bank loans → less capital costs
- at same yield → more surplus
- at lower share capital → more net yield (leverage-effect): rates up to 10 – 20 % are realistic!

5. More advantages of citizen´s wind farms

- very high acceptance in the public
- chance for high value added in the village by:
 - profit payments to the inhabitants
 - rent payments to the land owners
 - management by inhabitants
 - financing by local banks
 - construction and servicing by local firms
 - payment of trade tax to the municipality
 - meetings and festivities in local restaurants

5. Citizen´s wind farms in Nordfriesland

- Inhabitants: 160.000
- Citizen´s windfarms: about 60 with 800 MW wind
- Invest volume: about 1.000.000.000 Euro
- Income: about 200 Mio. Euro p.a.
- Local taxes: about 15 Mio. Euro p.a.

6. Conclusion

- citizen´s wind farms = democratising the energy production
- citizen´s wind farms = ecology and economy with and not against the public
- citizens become entrepreneurs with green objectives
- risks are accepted and chances are used

.....see you in.....
Bohmstedt!

Thank You
for Your attention!

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