

Co2mmunity: Community Energy Projects

Community energy projects offer enhanced production of renewable energy from local sources (wind, solar, biomass, hydropower, geothermal) through active participation of local communities. Together, citizens co-finance, co-develop, and co-operate renewable energy plants, and foster sustainable energy distribution.

1. Title of the project *

Wind turbine for the Smalininkai community

2. Country *

Lithuania

3. Location (city, village, etc.), address *

Smalininkai Village community, Jurbarkas Municipality.

4. Short description of the project (3-5 sentences) *

Smalininkai community has decided to implement new 250 kW wind turbine project. It was the first example of the community's wind turbine project in Lithuania.

5. Type of community

Urban

Rural

6. Type of project *

Renewable electricity

Renewable heat source

Energy efficiency or energy saving (renovation of buildings etc.)

New technology piloting

Other: _____

7. Technologies *

- Bio CHP plant
- Biogas reactor
- Biomass boiler
- Central heating system
- Demand response automation system
- District heating network
- Electric battery
- Electric vehicle charging station
- Energy efficient windows, insulation etc.
- Heat pump for heating and/or cooling
- Internet application related to energy system or service
- Micro-grid
- Solar heat collectors
- Solar PV system
- Thermal storage
- Wind turbines
- Other: _____

8. System / service / outcome pictures (please write a link(s) to pictures)

<https://www.windtechniknord.de/eng-wtn250>

9. Ownership model

- Fully financed and owned by a community
- Received financial support for investment and fully owned by a community
- Participation through buying shares
- Co-operative membership
- Participation through aggregator or other energy service provider (individual contract)
- Other: _____

10. Main stakeholders of the project

Smalininkai Village community,
Jurbarkas Municipality;
Non-profit organizations; reserchers;
Private suppliers and contractors,
Local Credit Union.

11. How was the project funded? (several answers possible)

- Community funds
 - Bank loan
 - Subsidies
 - Government grant
 - Municipal grant
 - European funding
 - Crowdfunding
 - Other: The World Bank; Municipal Local Activity Group "Nemunas"
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12. Type of benefits and investment motives

- Direct income from selling energy
 - Energy and cost savings
 - Income from shares
 - Climate and environmental benefits
 - Adoption of new or smart technologies
 - Improvement of indoor air quality or other living conditions
 - Improvement of local economy
 - Increase of community resilience
 - Other: _____
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13. How was the rest of the community involved in the project? (several answers possible)

- Participated in discussions
- Opposed the project
- Supported the project
- Participated in the decision-making
- Received a revenue share
- Was not involved in any discussions

14. Did you receive help from any organisation, public institution or other similar project? If yes, from whom and how did they help you?

local politicians (municipal, eldership), scientists, technical experts

15. Lessons learnt (NIMBY, institutional barriers, financial barriers, regulative barriers, etc.). How the project became successful after all? Any advices for other community energy project managers?

Financial barriers due to necessary high investment, long payback without subsidies, and could hardly be impemented without the help of technical experts. Unfortunately, in long-term the project appeared to be "no success story" due to lack of funding and now is owned by private farmer. Besides, Wind plant was on unknown technology, produced in India, and in Lithuania there was lack of O&M experts, it was not generating estimated electricity volumes.

16. Website link

<http://www.manoukis.lt/mano-ukis-zurnalas/2008/11/pakinkytas-vejas-suks-nauda-miestelio-bendruomenei/www.dvi.lt/download.php/fileid/102>

17. Contact information *

Vanda Stonienė, Nemuno g. 54, Smalininkai 74221,
Smalininkai eldership., Jurbarkas municipality,
+370 447 56268; +370 606 79795

Technical and economic details

Technical and economic details of community renewable energy project.

TECHNICAL DETAILS: 1. System size or purchase volume (kW, MW, amount of units): *

250 kW

2. System installation or product adoption time: month/year *

2008-2009

3. Expected system or service lifetime

25 years

4. Energy production or savings/year

450000 kWh/a (estimated), in reality not more than 300000 kWh/a

5. Who is taking care of the Operation and Management?

O&M company

ECONOMIC DETAILS: 1. Investment or purchase cost:

300915 Euro

2. Operation and Management cost/year

3475 Euro

3. Total amount of subsidies received

380270

4. Economic feasibility: Internal Rate Of Return (IRR), Net Present Value (NPV), Payback Period

15 years Payback period
