

# 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 \*

Energy efficient Passive Building for Social Services of the Full House Community in Panara

---

## 2. Country \*

Lithuania

---

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

Panara village, Varėna Regional Municipality

---

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

---

## 5. Type of community

## 6. Type of project \*

---

## 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: Certificated passive house
- 

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

<https://www.construction21.org/lietuva/case-studies/lt/piln-nam-bendruomens-socialini-paslaug-namas-panaros-k.html>

## 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

Full House Community (Catholic religious community, aiming to provide social and psychological rehabilitation to people with alcohol and drug addictions), funded by charity and community means.

National Passive House Association – consulting.

Architect Mindaugas Dagys, certified planner of Passive Buildings.

UAB “Dzūkijos statyba” – main contractor of the project.

A number of subcontractors, who were supporting this pilot project.

---

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

- Community funds
  - Bank loan
  - Subsidies
  - Government grant
  - Municipal grant
  - European funding
  - Crowdfunding
  - Other: Lithuanian Environment Fund; Private charity support.
- 

## 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: Pilot wooden passive house, first certified in Lithuania.
- 

## 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?

There was significant help from National Passive House Association, Architect and a number of subcontractors.

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?

The inhabitants of the community actively participated in construction work themselves, there was stronh support from the Church, which was among the founders of the community, and strong support from Passive House Association and it's member enabling to show the cons of "passive housing" for wide community.

16. Website link

<http://www.pnb.lt/content.php?page=projektai/namas1/index#virusus>

17. Contact information \*

Projects manager Mrs. Rūta JAKUBONIENĖ

Mob: +370 698 87006

E-mail: [ekoukispnb.lt](mailto:ekoukispnb.lt)

## 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): \***

Heat pump with vertical soil collectors - Stiebel Eltron WPF16 (16.2 kW); 8 solar collectors FK Solinas.

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

2011-2012.

**3. Expected system or service lifetime**

Living period of the building – 50 years.

**4. Energy production or savings/year**

Heat consumption  $\leq 14$  kWh/m<sup>2</sup>/a

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

Community is operating the building, including RES system.

**ECONOMIC DETAILS: 1. Investment or purchase cost:**

Construction costs 435,500 €. Estimated construction costs: 650 €/m2.

---

**2. Operation and Management cost/year**

1 Euro/m2/year, i.e. 749 Euro/year.

---

**3. Total amount of subsidies received**

0

---

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

N/A

---