

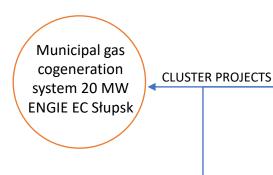
Słupsk Bioenergy Cluster Project: Słupsk Bioenergy Island

ENERGY TRANSFORMATION OF POLISH CITIES Słupsk 25





IDENTIFICATION OF STAKEHOLDERS, FUNCTIONS AND GOALS



SKB - SŁUPSK BIOENERGY CLUSTER

CLUSTER COUNCIL:

- WODOCIAGI SŁUPSK leader municipal company BIOGAS
- ENGIE –Local heating company CHP
- PARR –Administrator of the Słupsk Economic Zone PV
- BALTIC WIND Owner of wind turbines- WT
- CITY OF SŁUPSK Local government AGGREGATOR

SIGNATORIES OF THE AGREEMENT:

20 LOCAL ENTREPRENEURS & THE CITY OF SŁUPSK

SWB - SŁUPSK BIOENERGY ISLAND - PROJECT STAKEHOLDERS







ENERGY COMMUNITY



DSO **FNFRGA**



ENERGY MARKET



LOCAL **GOVERNMENT**



SME - LOCAL **INDUSTRY**



RES (collective) PROSUMERS



LEADER

TRUSTEE (Integrator)





END CUSTOMERS



SWB - LOCAL DSO, TRADING COMPANY



EMISSION-FREE PUBLIC TRANSPORT



RESEARCH & DEVELOPMENT

Vision

OWN LOCAL LOW-EMISSION AND COMPETITIVE ENERGY IN A FRIENDLY LOCAL GOVERNMENT

WHO IS THE INITIATIVE ADDRESSED TO?

TO THE CONSCIOUS AND COOPERATIVE PROSUMER, PRODUCER AND CONSUMER OF ENERGY AND FUELS

PRINCIPLES AND MAIN STATEGIC OBJECTIVES

- LOWER TOTAL ENERGY COST AT ENDUSER;
- ☐ CREATING BETTER CONDITIONS FOR THE DEVELOPMENT OF LOCAL RES;
- ☐ IMPROVING THE ECONOMICS OF ENERGY GENERATION FROM RES;
- ☐ TRANSPARENT, VOLUNTARY AND OPEN MODEL OF COOPERATION;
- ☐ IMPROVING RELIABILITY AND ENERGY SAFETY;
- ☐ ORIENTATION ON COMMON VALUES AND GOALS (LOCALITY, CSR);
- IMPROVING ENERGY EFFICIENCY;
- ☐ REDUCTION OF THE EMISSION OF THE LOCAL ECONOMY AND LOCAL GOVERNMENT;
- ☐ CREATING PERMANENT ECONOMIC AND SOCIAL TIES.

COOPERATION - EFFICIENCY - INNOVATION - LOCAL MARKET

Components of the Słupsk Bioenergy Island project with estimated costs (only for electrical activities)

Together 17,5 mln Euro

Associated infrastructure, energy storage and transmission lines 7 mln Euro

New generation sources of RES + CHP 9 mln Euro

Energy balancing, software, R&D projects, new competences and energy services 1,5 mln Euro

- Flexible Energy energy storage
- Green Energy Island DSO distribution networks with accompanying infrastructure and connection to the CHP Engie "Słoneczna"
- Zero-emission transport E-mobility
- PV 2.5 MWp PARR Energy for Industry
- PV 2.5 MWp SWB Energy for People
- PV 2.5 MWp City of Słupsk / SWB -Energy for Local Government
- PV on communal facilities Energy for environment - 15 facilities
- CHP "Orzeszkowa" 3.1 MWe Energy for the Cluster gas source

- Knowledge and competences Advice, legal assistance, etc.
- Intelligent Energy IT energy balancing - Energy Resource Management System with metering
- Innovative Energy R&D projects smart accounting, "green hydrogen" or biomethane











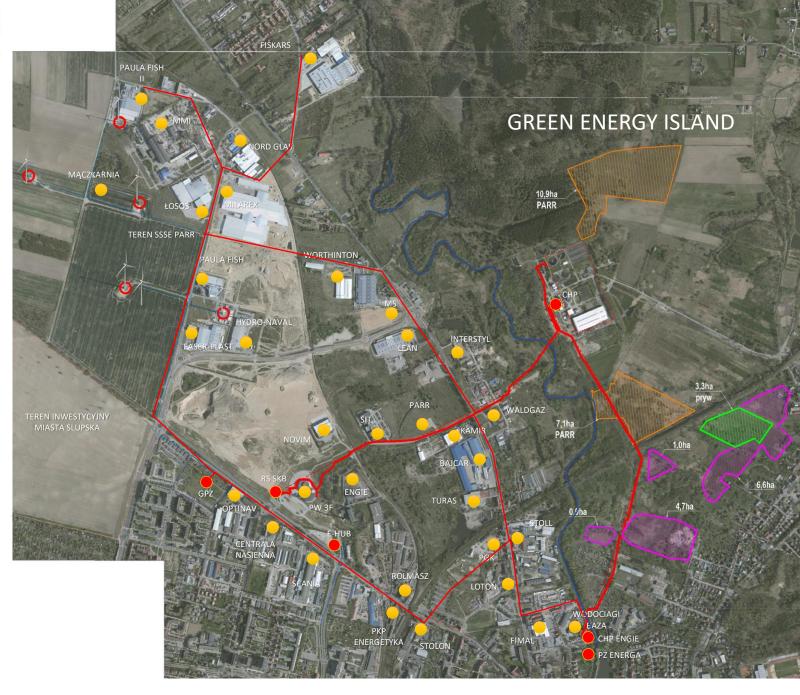
GENERAL ENERGY BALANCE OF THE PROJECT:

Estimated electricity production from RES + CHP:

- Currently 40 GWh/year
- A realistic prospect 70 GWh/year
- Potential 100 GWh/year

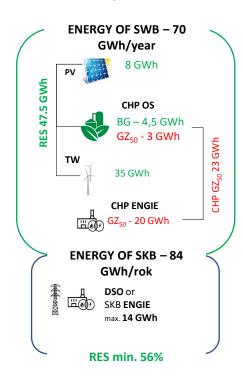
Estimated electricity demand:

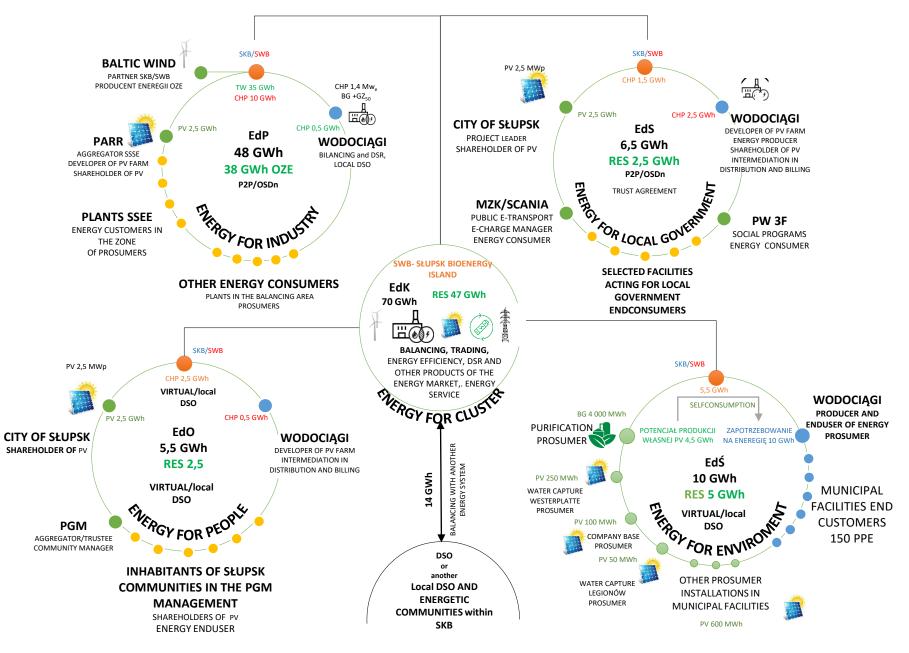
- Currently 43 GWh/year (cluster participants)
- A realistic prospect 70 GWh/year
- Potential 100 GWh/year
- important electrical points of the electrical network
- Important endusers
- Wind energy producers
- areas for the construction of PV farms
- 15 kV cable lines



ELECTRICITY PROJECTSENTERING THE RANGE OF SWB

POTENTIAL OF ENERGY IN SKB/SWB

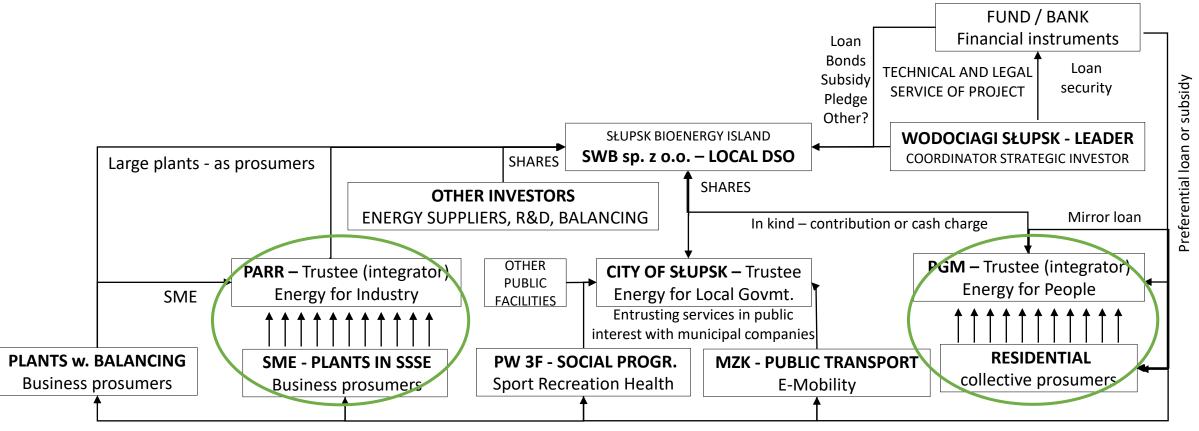




BUSINESS MODEL

OPTION I – COMPETENT COMPANY WITH CONTROL OF DEFINED SHAREHOLDER-PROSUMERS

OPTION II – COMPANY OR MUNICIPAL HOLDING (based on the Municipal Economy Act)





Thank you for your attention

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