

### Information about the municipality

**Location:** Southeast Poland  
**Altitude:** 92 m  
**Inhabitants:** 12,000  
**Expected development of the municipality:**  
 Renovation & improvement of public buildings.  
 Construction of new residential housing.



### Miniproject title

## SWIMMING POOL UPGRADE - IMPROVING TENDERING DOCUMENTATION FOR SUPPLY & INSTALLATION OF HEAT EXCHANGER & SOLAR PANELS IN THE SWIMMING POOL „NEPTUN”.

### SHORT DESCRIPTION

#### 1. Project background & goal

As a continuation of a number of public buildings thermomodernisation activities in Ozarow municipality, the project of utilization of renewable sources in the swimming pool facility was chosen because of highest costs for heating relative to other municipal buildings (the facility consumes 30% of all energy for heating in all municipal buildings). It was planned to enable the use of renewable energy sources and energy recuperation of 1,580.40 GJ/year.

**The Goal** of the project was to improve energy-wise the technical documentation for procurement of the new equipment, in order to reduce the use of natural gas and electricity, as well as CO2 emissions, by installing equipment with higher energy efficiency potential.

#### 2. Main project aspect/topic

- > Installation of solar panels (25 pcs) of 150 m2 in surface,
- > Installation of subsoil heat exchanger for heating water in the swimming pools and air in the building.
- > Reconstruction of existing ventilation system

#### 3. Main Energy Efficiency aspects

Use of renewable energy source and increase of energy efficiency

#### 4. Miniproject activities

- > Consultations with external and local experts regarding existing technical documentation for renovation of the swimming pool
- > Preparing tendering documentation for implementing the construction, with special regard to energy efficiency and quality assurance requirements
- > Conducting public procurement (tendering) procedure
- > Selection of winning tender
- > Construction works/realisation of renovation
- > Formal presentation of the swimming pool construction - promotion event for neighbouring municipalities
- > Public opening of renovated swimming pool – demonstration of shining example.

#### 5. Main challenges

- > New tendering requirements as a challenge for Polish contractors, due to little experience in deployment and maintenance of such technologies
- > Low development of energy efficiency and RES technologies in the Polish market, especially compared with Western Europe
- > How to guarantee EE and RES gains during the design and construction processes
- > Need for expert advice on quality control on the ground, due to lack of EE and RES experience in local administrations

#### 6. Key actors and their role

- > Ożarów municipal authority; German and local consultants; construction companies

**Responsibility for implementation:** Ożarów municipal authority



#### Contact:

Mr. Paweł Rędziak  
 Deputy Mayor  
 E: zastepca@ozarow.pl

#### 7. Main steering instrument(s) used by municipality

- > Introducing energy-optimized tendering procedures in public (re)construction works
- > Quality control requirement included in the call for tenders – a mechanism for guaranteeing energy gains to the client (municipality)

#### 8. Concrete miniproject results

- > Tendering procedure for the construction works on the swimming pool enhanced from the point of view of energy efficiency, by requiring long-term guarantees for future energy gains by tenderers.
- > Quality control: installing systems to measure energy saving (datalogger with a public display to demonstrate energy performance)

#### 9. Added values/lessons for transfer and dissemination:

- > Energy-optimized tendering procedures can be applied to thermomodernization procedures of other public utility buildings.
- > Section 'Frequently Asked Questions for municipal (re)construction projects' that reflects this tendering experience can be provided on municipal web or via other communication channels, as a useful reference to future tenderers, and for the general public.
- > Good experience with special technical equipment - subsoil heat exchanger – that uses renewable energy located in the ground at a depth of 1-4 m, with the capacity of 25.000/m3 and annually obtained heat energy amounting to -476 GJ.

### AFTER INTENSE

#### 10. Financing plan

- > 187 500 EURO (62%) – EU Rural Development Programme
- > 119 025 EURO (38%) - budget of Ożarów municipality

#### 11. Expected result by end of the total project

- > 1,580.40 GJ/year of energy supplied to the building through renewable energy sources and recuperation.

#### 12. CO<sub>2</sub> reduction potential of the project:

115,46 tonnes of CO<sub>2</sub> annually

#### Timeline & Milestones

Apr 2010 - Requirements specified  
 Dec 2010 - Tender published  
 Aug 2011 - Construction finished, swimming pool opened

#### Result by end of INTENSE:

Tender specifications enhanced and improved in terms of energy efficiency and quality control aspects. The swimming pool renovation and the upgrade finished and operational.

September 2011

#### Expected result by end of mini project implementation:

Tender specifications enhanced and improved in terms of EE and quality control. The renovation finished and the swimming pool operational.