

# Akademija – LT



→ Good practice example

## Pilot action community: Akademija (Kėdainių district)– Lithuania

### Type of energy consumption:

- heat energy  hot domestic water  electricity  water

### Use of renewable energy resources (potential or actual):

- biomass  wind energy  geothermal energy  solar energy  hydroelectric power station

### Rational use of energy:

- sustainable building systems, low energy housing  building thermal modernisation  modernisation and upgrading of the heating systems  modernisation of lighting  balanced/sustainable transport

The main goal of modernizing the heating systems was to reduce the negative environmental impact and to ensure the reliable provision of the heat energy to the households. The construction of the straw fuel boilers led to the gradual replacement of the fuel oil with less polluting fuels. That provided with the more efficient use of energy and created the positive environmental impact.

## → Community

### Short description containing:

Geographical position	Central part of Republic of Lithuania
Main profile of activity in the region	agriculture
Number of inhabitants	800
Important institutions	Agriculture institute

### Energy data:

Energy supply	35 multi-storey houses with 506 flats
Energy consumption	4 933 MWh
Type of fuel (for heat energy)	33% shale oil (375 t); 77% straw (759 t)

### Climatic data: (selected data important for the described case)

Average yearly temperature	7 °C
Mean wind speed	4.0 m/s
Average of heating days per year	184 days
Hours of sunshine per year	1 800

## → Context

The Akademija heating plant supplies the heating to the households of the community of Akademija in the Kedainiai district. In order to upgrade the heating systems there were several important investments made. The first investments were the instalment of two 1,25 MW capacity boilers which used the straw fuel and building additional heating plant facilities. Secondly, the construction of the storage equipment for the straw fuel was made. And third investment was the installation of the automatic system of fuel transmittance to the boilers. All these investments increased the heat energy efficiency, ensured the reliable heat transmission to the consumers. Moreover, the reduced use of the shale oil helps to save the environment and reduce the amounts of the imported fuel.



## → Cost and benefits

### Economical

The upgrading of the heating systems helps to reduce the use of the oil shale by 829 t/year. There fore by 2009 the use of fuel to the heat energy would consist of 98% straw, 2% shale oil.

Overall investments to the heating plant of the Akademija town amounts for 3.3 million Lt of which 1.435 million Lt were granted from the EU structural funds.

### Environmental

The planned increase of the amount of energy produced using the renewable resources (straw) by 7146 MWh/ year; to reduce the CO<sub>2</sub> emissions to 115t/year, and SO<sub>2</sub> emissions to 29t/year

This project is in line with the national increasing effectiveness energy consumption programme. The main goal of the programme is to ensure the reliable, safe transmission of energy while saving the costs and environment as well as to increase the efficiency of the energetic sector activity.

## Further information

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