

Experience in the demo region of Tukums (Latvia)

The municipality of Tukums is located in the western part of Latvia, around 70 km from the capital Riga. The main activities performed within the project framework include an analysis of the Sustainable Energy Action Plan of Tukums and the organization of workshops and discussions to raise the awareness of sustainable production and use of bioenergy. Events such as the Energy Day of Tukums municipality, including workshops on the use of renewable energy supportive technology in the demo region, were carried out during the Extension stage.

Analysis of the Sustainable Energy Action Plan of Tukums

The municipal Sustainable Energy Action Plan, which was approved in 2011, envisages the complete replacement of fossil fuels in the district heating system by renewable energy sources. Until 2011, 30% of heavy fuel oil was used in boiler-houses. "Tukuma Siltums" is the largest heat energy supplier in the town of Tukums – owning four boiler-houses, with a total installed thermal capacity of up to 42 MW. The aim of the district heating company was to replace fossil fuels with renewable energy sources in the district heating system. The municipality and the district heating company prioritized this aim in 2011, and the decision to modernize the entire district heating system was included into the municipality's Sustainable Energy Action Plan. The boiler-houses have undergone several cycles of modernization and upgrade. The last one was finished at the end of 2011, and now all boilers operate completely on wood chips. In addition, fuel gas condensers have been installed in each of the new boilers, thus providing additional 15-25% of efficiency in terms of heat energy production. Since 2011, the average conversion efficiency has reached 80%. During modernization of the boiler-houses, two new buildings with two additional wood chip boilers (5MW+5MW) to provide a total heat output of 20 MW were commissioned, and the remaining share of heavy fuel oil in the municipal heat balance was completely replaced with RES. The wood chips are obtained mostly from the surrounding region, and are transported no further than 50-60 km. The municipal Sustainable Energy Action Plan was targeted to ensure 100% RES in the district heating system and this goal has been achieved.



Biomass boiler-house in Tukums City

The municipality of Tukums has initiated a number of other projects and plans applicable to a number of new design competitions. The municipality achieved considerable progress in modernizing street lighting and successfully participated in various national tenders, securing co-financing from the municipal budget. In the field of

transport the municipality purchased energy-efficient vehicles and new buses and cars for various public services.

However the Sustainable Energy Action Plan of Tukums municipality needs to be revised. The activities implemented should be effectively monitored and evaluated in order to improve the sustainability of municipal actions in the field of energy.

Deputy State Secretary at the Ministry of Environmental Protection and Regional Development in Latvia Alda Ozola highlighted the huge potential of local and sustainable biomass in Latvia, and emphasized that *"Utilization of biomass as a renewable resource should meet environmental goals as well as provide local business opportunities."*

Tukums Energy Day and workshop on renewable energy technologies

Within the framework of Bioenergy Promotion 2, the Latvian Environmental Investment Fund, in co-operation with the municipality of Tukums, organized an Energy Day in Tukums in April 2013. The main activity of the Energy Day was a workshop to increase the local capacity for Sustainable Energy Action Plan implementation, and to raise awareness on the regional and local level about the energy performance of buildings.

Workshop participants included municipal project managers, experts from the planning and construction sector, other experts and stakeholders in the field of energy-efficient construction, existing or future beneficiaries of the Climate Change Financial Instrument and interested members of the public. Different kinds of renewable energy supportive technology were presented by the experts of the field – heat pumps, solar panels and biomass boiler systems. There was also a presentation on how energy efficiency can be increased in buildings, with illustrative examples. Participants had the opportunity to become acquainted with the:

- experience and activities of the Bioenergy Promotion 2 project in the demo region;
- specific questions regarding technologies supporting the use of renewable energy resources directly from experts of the field.

After the workshop visits were arranged to selected project implementation sites, providing the opportunity to discover good practices in the municipality of Tukums both in the field of renewable energy (including bioenergy) and in the field of energy efficiency.