

Interreg Baltic Sea Region

Mid-term evaluation of Programme impact

Case Study Report

LowTEMP



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1 Executive Summary

Impact on Target Groups by LowTEMP

SO	Target Group	Processes where Target Groups are involved	Learning Experiences /Use of Project products and results	Specific Impacts on the Institutional Capacities of target groups	Dimension of institutional capacity
2.3	Municipal representatives responsible for urban and energy issues, heat suppliers, planners and engineers, energy agencies	Target group representatives contribute with providing input and testing the knowledge platform which will be developed. Municipalities and authorities will provide local data, as will also do energy agencies.	LowTEMP will bring together actors in charge of urban development, energy supply and district heating systems from various municipalities and regions in the BSR, to collect data and information on the existing heating supply systems. Creation of a knowledge platform that will support them in the planning, management and development of their energy supply systems.	Increased know-how and knowledge on low temperature district heating.	Enhanced institutionalised knowledge and competence.
2.3	Municipal representatives responsible for urban and energy issues, heat suppliers, planners and engineers, energy agencies	Target groups test the project results and contribute to the knowledge sharing.	Pilot energy strategies and related training material will be produced. Within LowTEMP, a training programme on the planning, installation and management of LTDH systems will be developed. The final version of the training programme will be transferred via "Train the trainer" approach to other BSR municipalities and those being responsible for the energy supply infrastructure.	Increase capacities of target groups to implement and work with low temperature district heating systems and contribute to higher efficiency in energy use and provision	Enhanced institutionalised knowledge and competence; More efficient use of human and technical resources (databases, technical solutions, small infrastructure etc.); Better ability to attract new financial resources; Increased capability to work in transnational environment.

2 Project description

Energy consumption is one of the core challenges in Europe and the Baltic Sea Region. District heating systems are widespread in the Baltic Sea Region, but often outdated and without complying with the energy efficiency standards. Low temperature district heating is a possibility to optimise the existing district heating systems and to develop independent future sustainable grids. This is the challenge the 'Low Temperature District heating for the Baltic Sea Region' (LowTEMP) project will address.

The project wants to raise awareness and disseminate know how among the responsible public and private stakeholders about the necessity to deploy sustainable energy supply systems that allow the use of renewable or unused surplus heat and low temperature heat distribution. Therefore, LowTEMP will provide district heating stakeholders with strategic tools and knowledge on how to plan, finance and install and manage LTDH systems. This will hopefully restructure the existing district heating systems towards future sustainable low temperature district heating grids. As a result, the Baltic Sea Region is expected to become a more efficient energy supply systems and achieve energy saving, better economy and cleaner region.

The LowTEMP project supports priority axis 2 on natural resources of the Interreg Baltic Sea Region programme and more specifically specific objective energy efficiency.

The project has a duration from October 2017 to September 2020 and a total budget of EUR 3.77 million. It has in total 19 project partners and the lead partner is the Institute of Fluid Flow Machinery, Polish Academy of Sciences (IMP PAN), from Poland. The management of the project, incl. its communication is taken forward by the Atene consultancy.

The project has also a wide array of 30 associated partners to facilitate the dissemination and implementation of project results and learning experiences.

LowTEMP is not a EUSBSR flagship project, however, it indirectly contributes to the EUSBSR objectives through its thematic linkages.

3 Expected results, outputs and activities

The main target group of the LowTEMP project are municipal representatives responsible for urban and energy issues, heat suppliers, planners and engineers, energy agencies and alike. The project highlights that building owners and housing associations at this stage of the project are not a direct focus of the project, as they will be involved only after the capacities of the target groups are increased and strategies can be presented (application form). The project has organised so far a number of awareness raising events and conferences on the promotion of renewable energy sources and the possibilities of low temperature district heating. The project has recently started and has not yet delivered its first progress report, which is expected in summer 2018.

Expected project results and outputs*

Expected Project Results
First aim to increase the know-how competences within the partners. As a first result the project aims to increase awareness and enlarge capabilities and capacities of the target groups. The project aims to increase the knowledge of the target groups (i.e. local and regional authorities responsible for urban and energy related issues, DH and utility providers, energy agencies, academic institutions as well as engineers and planner working in the field of energy efficiency in urban areas) in a transnational environment, learning about what similarities in challenges are existing in the partner regions.
The second aim is about jointly collecting and analysing data and information and then develop knowledge tools. This will result in increased knowledge and capacities of all approached target groups, accomplished by involving them in project activities and by transferring the project know-how and expertise on the implementation of LTDH systems to them. The means to transfer this knowledge area knowledge platform, pilot energy strategies, models simulating environmental benefits and financing schemes for LTDH.
The third aim is about applying and disseminating the developed know-how and the project outputs, e.g. pilot and energy strategies, proof of LTDH sustainability and financial strategies that support the implementation and management of LTDH systems to broader target groups. They shall be educated by a training programme which is developed in LowTEMP and will be used to transfer knowledge on planning, financing, constructing and managing of LTDH grids. This shall be done via a "Train the trainer" approach. The result is increased capacities of target groups outside the partnership, i.e. in many regions and municipalities of the BSR.
Expected Documented Learning Experience
The project will bring together actors in charge of urban development, energy supply and district heating systems from various municipalities and regions of the Baltic Sea Region to collect data and information on the existing heating supply systems from the partner consortium and the stakeholder network. These data and information will be jointly discussed among the partners. Project partners will then be offered a knowledge platform having providing a data pool of information to support them in the planning and management of the energy supply systems.
Partners will accompany and support the development of the pilot energy strategies (incl. LTDH solutions) for the participating municipalities. This will be a joint learning experience, meaning that the municipalities will determine and present their need for action as well as their development goals as regards the energy supply infrastructure, and discuss this in the partner consortium. Also pilot testing measures, which are an initial step for the realisation of goals from the pilot energy strategies and the planned installation of LTDH, will be assessed by the whole partnership. The finalised pilot energy strategies and testing measures will be assessed by the whole partnership regarding effects and innovativeness as well as disseminated to the LowTEMP target groups all over the BSR. They document the learning experience.
Within LowTEMP, a training programme on the planning, installation and management of LTDH systems will be developed that is first of all based on the knowledge and outputs generated from other WPs. The first version of the training material will be tested by the partner consortium and by selected stakeholders from all partner countries which are dealing with energy supply issues in the close network of the project partners. This group of actors will jointly evaluate the content of the training programme and provide recommendations for amendments. The final version of the training programme will be transferred via "Train the trainer" approach to other BSR municipalities and those being responsible for the energy supply infrastructure.
Expected Other Outputs
No. of local/regional public authorities/institutions involved: 5
No. of national public authorities/institutions involved: 3
No of enterprises receiving support: 3
No of enterprises receiving non-financial support: 9
No of enterprises cooperating with research institutions: 10
Amount of documented planned investments to be realised with other than the Programme funding: 0

*as defined in the Application Form Sections 3.8, 5.1 and 5.2.

4 Project partnership

The partnership of the project is comprised by 19 partners and 30 associated partners. Among the partners are four higher education and research institutions, one SME, four local public authorities, one regional public authority, two interest groups, one business support organisation, four sectoral agencies, one large enterprise and one infrastructure and public service provider. The associate partners are mainly target group representatives, e.g. local public authorities, regional public authorities, national public authorities, SMEs, sectoral agencies, infrastructure and public service providers, and interest groups.

The partnership is quite diverse, however, so far it works well without any obstacles. The research institutes support the planning on research to enable new kinds of applications and more in-depth applications. Public authorities are important to apply the system locally, i.e. apply to local grids and make this project happen in practice, but also support the project in the organisation of conferences. Private actors play an important role in the project as they focus on the practical application of the project.

Regional and Local Public Authorities	Holbaek Municipality	Lejre Municipality	City of Malmö
	Gulbene Municipality Council	Vidzeme Planning Region	
Research Organisations	Institute of Fluid Flow Machinery, Polish Academy of Sciences (IMP PAN)	Brandenburg University of Technology (BTU) Cottbus - Senftenberg	Riga Technical University (RTU)
	Klaipeda University		
Other	ZEBAU - Centre for Energy, Construction, Architecture and the Environment GmbH	Gate 21	Sustainable Business Hub (SBHub)
	Thermopolis Ltd.	District Heating Kurikka	Tartu Regional Energy Agency (TREA)
	Public Institution Housing Energy Efficiency Agency	ANO Energy Efficiency Centre (ANO EEC)	District Heating Enterprise Ltd. - OPEC Gdynia
	AGFW Energy Efficiency Association for Heating, Cooling and CHP		

The benefits of the partners participation is the information and knowledge exchange, e.g. from the municipalities partners learn how things progress and are sometimes surprised by the speed things process. This knowledge exchange results in inspiration in the daily work of other partners.

5 Contribution of the project to the EUSBSR

The LowTEMP project is not flagged as a EUSBSR flagship. Nevertheless, there are thematic linkages between the project and the EUSBSR objectives and policy areas, so the project indirectly contributes to the priorities of the EUSBSR.

This regards issues related to energy, and more specifically the challenges formulated in the two objectives of the EUSBSR on 'Connect the Region' and 'Increase prosperity' and the sub-objective 'reliable energy markets' focusing on more efficient energy distribution, increase use of clean renewable energies and actions to reduce energy demand. These objectives match with the aim of the LowTEMP project, which is the promotion of more energy efficient heating supply systems in the Baltic Sea Region, allowing for an increased use of renewable energy efficient heating supply and recycled heat from low temperature sources in the heating system. The project also indirectly contributes to the sub-objective on 'climate change adaptation', under the 'increase prosperity' objective. The project is also in line with the PA Energy, contributing to the target "Fuel switching in heating/increased use of RES in heating" as it aims to switch from fossil fuel energy supply to renewable sources in LTDH systems. Some synergies can also be found with EUSBSR HA Capacity, as the project also aims to bring together actors from different fields, as well as with EUSBSR HA Climate, on climate and environmental related issues.

Despite the linkages and possible observed synergies, the extent of awareness among the project partners about the EUSBSR varies largely.

6 Communication and outreach to target groups

As regards the communication of the project it is mainly the lead partner responsible, together with the partner 'Thermopolis', which outsourced the management and communication of the project to the Atene KOM consultancy. Each project partner has appointed a communication officer to implement the activities locally, trying to work collectively in a group. The appointed communication officers are responsible for the planning and coordination of communication activities at the partner level and they are in close cooperation with the Communication Manager (Communication plan, draft). This more pragmatic process is standard by now, where each partner has somebody who is responsible for local communication. This approach gives a clearer division of labour and responsibilities per project partner. Communication means regard direct phone calls, personal meetings.

As regard the communication activities of the project to the target groups, the communication plan of the project aims at activities that support continuous relations with the key stakeholders and target groups throughout and even beyond the project lifetime. The communication aims therefore, comprise the following: receiving input from stakeholders and collecting relevant data, increasing knowledge about smart DH and LTDH systems and understanding the need for comprehensive energy strategies, financing schemes and business models., raising awareness about the necessity to renew and adapt existing DH systems, change the attitude of stakeholders towards LTDH and change the behaviour of stakeholders that would result in including smart and sustainable DH supply systems in their plans and strategies, triggering respective investments.

In terms of tools and activities, the communication plan foresees different communication tools for the implementation of the communication strategy. These include the LowTEMP visual identity, the project’s website, press and online media, social media, events, print and digital publications, citations of the LowTEMP project in research and academic publications.

The project reaches its target groups through its partners, especially the local ones and by attending events. At the moment, it is difficult to have a feedback on the project from the target groups, however, there is a lot of interest seen in the events with participants realising the importance of the topic. Although the project has recently started, it established some good contacts with public authorities in Estonia, Latvia and Russia and try to present and make the project known among different actors. Each communication officer publishes relevant material of the project to raise awareness about it, such as press releases to their network.

Target Groups
WP2: project partners, heat suppliers in the partner regions, energy agencies in the partner regions, partner municipalities and municipalities cooperating in networks, public authorities responsible for energy and DH systems, research institutions dealing with DH systems, energy agencies in the BSR, urban planners/engineers in the partner municipalities
WP3: LowTEMP partner municipalities and all local actors/stakeholders to be involved in the reconstruction of the district heating network. The pilot energy strategies shall be used by these actors as a guidance that provides a methodology and concrete action approaches to improve their local energy systems, focussing on the reconstruction of the energy supply system and the integration of LTDH.
WP4: The LCA will contribute to an awareness raising with the WPs target groups as well as to the change of attitude and behaviour when planning new DH supply systems: municipalities and public authorities responsible for energy topics, heat suppliers and energy utilities, planners and engineers as well building owners will be approached and introduced to the results of the LCA.
WP5: Municipal actors responsible for the strategic planning of the DH grid, district heating suppliers in the partner network and possibly in other BSR regions, energy agencies in the BSR, planners and engineers in the BSR, funding institutions in the BSR.
WP6: stakeholders dealing with DH issues which have been identified in GoA 6.2. They shall test the training programme and provide feedback which will be included into the programme. After the finalisation of the training programme, the “LowTEMP training package” is targeted at municipal representatives being responsible for energy issues, heat suppliers and energy utilities in the partner regions and networks, energy agencies, as well as planners and engineers all over the BSR.

Source: Application Form Section 4

Overall, the project perceives the support from the Interreg Baltic Sea Region programme as very helpful. Project partners have established a good relation with the MA/JS. The MA/JS has helped the project in different challenges, such as issues with First Level Controllers, or previous partners. The lead partner also attended trainings organised by the MA/JS on how to develop and proceed with the project. In communication, in particular, the support has been very good and clear, e.g. the MA/JS supported in the visibility issues such as the size of logos. Furthermore, the website of the programme is also very helpful for the project and very clear, including the programme manual. As for communication and visibility, the communication seminar as well as bigger pan-Baltic events, such as the annual forums have been very useful as regards networking.

So far, nothing is missing or needs to change, however, the project has just started so this is still under development.

7 Impact on target groups

The main target group of the LowTEMP project are municipal representatives responsible for urban and energy issues, heat suppliers, planners and engineers, energy agencies and alike.

The main expected impact of the project is that target groups will gain more knowledge and know-how about district heating, its possibilities and comparative advantages so that they can change their mind-set and perception towards sustainable energy consumption. Therefore, the full process of the project is a learning process both for the project partners, who would all need to be up-to-date and have a know-how of district heating, but also for the target groups. Enhanced institutional knowledge and competence, especially as regards availability of knowledge and utilisation of knowledge feature high in the expected income. The knowledge to be gained among the project partners will then be distributed to target groups. Project partners can transfer knowledge they gain from their work with the LowTEMP project to other projects they are working on, contributing to institutional learning.

The cooperation among the partners and their relations and contacts with the different target groups increase the capability to work in transnational environment, as there are competences to work at this level, and there are communication means in place to support dissemination of results and coordination among the partners.

However, the project is still in its initial phase, so more insights and learning effects will be available in the near future to better grasp the impact of the project. For this reason, the impact of the project is not yet visible.

The expected results of the project lead to a potential impact among targeted stakeholders in the following dimensions and characteristics of institutional capacity:

Dimensions of Institutional Learning induced by the Project			
Enhanced institutionalised knowledge and competence	Impact on the availability of knowledge about district heating opportunities in novel fields	Impact on the availability of mechanisms for knowledge transfer	Impact on the utilization of knowledge about low temperature district heating
More efficient use of human and technical resources	Impact on the utilization of human resources	Impact on the utilization of technical resources	Impact on the application of time-and/ or resource-saving measures
Better ability to attract new financial resources	Impact on the ability to attract external private financial resources	Impact on the ability to attract external public financial resources	
Increased capability to work in transnational environment	Impact on the available competences to work transnationally	Impact on the frequency of transnational contacts	Impact on the intensity of transnational contacts

Source: Application Form Section 3.8

8 Annex

List of Interviews conducted for the Case Study Research

Name	Organisation	Role in Project	Contact data (email or phone)	Date of interview
Adam Cenian	Institute of Fluid Flow Machinery, Polish Academy of Sciences	Lead Partner	cenian@imp.gda.pl +48 600 48 19 55	19/06/2018
Stefan Simonides	Brandenburg University of Technology (BTU) Cottbus-Seftenberg	Project Partner	simonides@b-tu.de +49 355 693929	20/06/2018
Darijus Valiucko	Atene KOM	Communication Officer	d.valiucko@atekom.eu +49 341 962103-19	20/06/2018
Kalle Virkus	Tartu Regional Energy Agency (TREA)	Target Group representative	kalle.virkus@trea.ee +372 551 2424	27/06/2018

List of revised documents

- LOWTEMP Application Form
- LOWTEMP (draft) Communication Plan
- Websites:
- <https://projects.interreg-baltic.eu/projects/lowtemp-112.html>
- <http://www.lowtemp.eu/about-2/>
- <https://atekom.eu/sustainable-heating-supply-infrastructure-for-the-baltic-sea-region/?lang=en>
- <https://www.zebau.de/projekte/lowtemp/>