AREA 21 + action
Updated profile of EID Polytechnic

What is this paper about?

AREA 21 + action follows up on AREA 21. In the predecessor project, the consortium developed the so-called Energy Improvement District (EID). The energy actors in these areas, including the local and regional authorities, energy providers, building owners as well as citizens, have participated through the EIDs in a cooperative energy planning process. This resulted in the development of EID Strategies and Action Plans to support improved energy efficiency.

AREA 21 + action provides the frame in which first measures from selected EIDs can be implemented and the potential of the EID concept to contribute meaningfully to both integrated energy planning and emissions reductions can be demonstrated.

This briefing paper shows how the EID Polytechnic approaches this task, i.e. how they implement their Action Plan developed in the predecessor project. For further information about the EID Polytechnic, please refer to https://area21-project.eu/pilot-areas/st-petersburg/

Achievements so far

Achievement 1: Based on the EID concept, SPbPU has developed the strategy and action plan for the implementation of energy efficiency measures as well as activities to involve students and staff of the university.

Achievement 2: The main stakeholders and their motivations to collaborate to improve energy efficiency in the framework of the EID Polytechnic were identified. Students are one major stakeholder group.

Achievement 3: Students as energy end-users in the EID Polytechnic have no direct economic motivation for energy saving. To activate them and raise awareness, they were involved in co-creation activities through students' societies (e.g. the students' competition "EcoGen Cup") and education processes (students' research and graduation works). Some of the students' suggested measures and inputs have been translated into concrete actions in the Polytechnic's action plan.

Vision and actions for the extension phase

The vision of the EID is that the "Polytechnic is a high-quality green habitat". It is supported by increasing the reliability of the energy system and to reduce heating and electricity costs. In addition, awareness on efficient use of energy should be increased with the intention to engage 30% of university students and staff.

Action 1: Replacement of the automated heat points in dormitory #17 and educational building #4. Stakeholders involved are SPbPU services of the Chief Engineer, suppliers of equipment, and regional organizations.

Action 2: Piloting of organizational measures for energy saving in a dormitory as a typical building where end users do not have direct economic motivation in reducing energy consumption.

- Development of the internal regulation on stimulating the SPbPU units' activities for energy saving
- Collecting and analysing data on energy consumption in the pilot unit
- Stakeholders involved are SPbPU management, managers of pilot buildings, and end users (students and teachers).

Action 3: Raising social acceptance of measures for reducing energy consumption.

- Visualisation of collected data on energy consumption in pilot buildings and dissemination of the data among end users
- Synergy from combining the project actions and education activity (development of topics for term papers and graduate work of bachelors and masters based on EID issues).

Potentials and expected results

Goal 1: to increase the reliability and efficiency of the energy consumption system in the EID. Modern heat points will supersede the equipment that has reached its end of life. Automated systems will provide high efficiency in energy consumption.

Goal 2: to reduce heating and electricity costs. A synergy is generated by combining the energy efficient equipment with ICT tools, and changing end users' behavior will reduce total energy consumption and corresponding costs.

Goal 3: to raise end users' awareness for conscious energy consumption and saving. Planned actions aim to understand end users better and take into account their motivation system (e.g. it is planned to carry out surveys (Google Forms and Survey Monkey), to involve students with projects and final/graduate qualification works using different tools such as Miro).

Modern automated heat points will provide comfortable indoor climate in dormitories and educational buildings while caring for the environment due to a reduction of energy consumption. Increased awareness and the activation of students and university staff will reduce the overall energy consumption. Increased awareness will also motivate further people to reduce their energy consumption.