

Energy efficiency improvement of the public buildings in the municipality of Tolmin: Energy accounting

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Keywords:

- Building culture Construction
 Closed loops Governance Planning Tools
 Ecology Energy efficiency Indicators
 Mobility Technology transfer

Target group:

- Architects Builders Citizens Craftsmen
 Home Owners Planners Politicians
 Policy Makers

PORTAL VILAGO

ENERGYViLLab
 LIVING LAB FOR SUSTAINABLE DEVELOPMENT



Results and outcomes (use cases):

Improving of energy efficiency of public building can be achieved with efficient energy planning (meaning several successive administrative and investment measures/actions):

- Energy audit of public building;
- Cost/benefit analysis for identification of possible interventions in the field of energy efficiency and renewable energy sources in selected buildings. Analysis includes also a description of costs and benefits of each proposed measure/action;
- Energy accounting for planned and targeted monitoring and controlling of energy consumption in the buildings. It is a tool for efficient use of energy and for planning the investment for improving of the situation.

Energy accounting was designed as an application for entering data and for reviewing of the energy consumption or monitoring the consumption of electricity, heat and water. Data are entered monthly. There is a possibility of collecting data continuously by sensors. Web application of energy accounting was designed as a part of the project EnergyViLLab. It is a living lab and it will be upgraded and alive also after the end of the project. You can find this application on web page: <http://vilago.golea.si/>

Public buildings in the area of municipality Tolmin which have introduced energy accounting are: Kindergarten Tolmin, Primary school Most na Soči, Primary school Podbrdo, School centre Tolmin, Library Tolmin, Health centre Tolmin, Tolmin museum and Music school Tolmin. In all these buildings there was made identification of consumption and after that prepared SEAP.

Description:

Because of the law of the Republic of Slovenia all public buildings are introducing energy accounting which gives an insight into energy consumption and control of energy consumption (independent of the type of energy). Energy accounting also serves as an overview of emissions in terms of consumption and the type of energy source. Local energy concept is a document which helps municipality in analyzing the situation in the energy sector and energy supply. It is a base for sustainable energy action plan (SEAP) which defines different actions for increasing energy efficiency per year. Municipalities have chosen their energy manager who helps them. For successful work the right tool is needed. Local energy agency GOLEA is energy manager for Municipality of Tolmin. They have developed web application for efficient energy accounting which ensures the credibility of the input data. This application is the base for preparation of documentation in the field of sustainable energy – at the level of each selected public building or at the level of municipality.

Relevance for inter-municipal planning: (AlpBC)

Energy accounting is the base for preparation of documentation in the field of sustainable energy – at the level of each selected public building and at the level of municipality. If we connect systems of different energy managers in a network there is a possibility of monitoring and planning of energy consumption also on regional and national level.

One of the advantages of introducing energy accounting is that it is easy to see where consumption is too high. This encourage immediate searching for solutions and actions, even actions which don't require high investment (switching off lights, controlled water consumption etc.). Investment costs can be reimbursed with the funds which are saved through realized actions for improving energy efficiency (replacement of doors and windows, isolation etc.). It is possible to invest all savings into further energy efficiency renovations in the public buildings, public lightning, heating system etc.

Relevance for policy goals (in Alpine Space, Europe, and/or region)

With energy accounting it is possible to encourage, monitor, plan and improve energy efficiency of all public buildings and to follow the goals of sustainable energy. This tool is possible to upgrade to be useful also for private buildings (family houses).