Increasing the competitiveness of the city with energy efficiency measures – possibilities for Latvian cities

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Abstract

In the second half of the 20th century, scientists and the general public started to think actively how to limit global warming. Today, even larger part of the society is engaged in various activities targeted at reducing CO2 emissions, making the most efficient use of available resources and deriving maximum benefit from these activities. In cooperation with scientists cities are looking for new theories and solutions to limit global warming. Today, the most popular theories applied to practice are "Green city" and "Smart city".

In the recent years, Latvia, as one of the greenest countries in the world, is actively looking for different solutions to reduce CO2 emissions and gain energy from renewable resources - sun, wind, water, etc. By using different ways of energy production and its efficient use, cities can increase their competitiveness in the national and regional levels. Thermal insulation of buildings and the use of "smart grid" that would enable consumers to get involved in the energy production would contribute to the city, where energy is produced in an environmentally friendly way and the city itself would have visually attractive, refurbished buildings with modern technologies.

The main advantage of "smart grid" system is that it changes approach to the electricity market. Connecting all electric generators in the common system enables every customer to become a supplier. Such circuits grant the customer a new more important role. Modern trends and the latest technologies offer to the consumers opportunity to change and become producers as well. Since the energy moves in both directions, it is possible to connect new sources of energy any time, because the system circuit is already active. This feature complies with the plans of the European Commission to decentralize the electricity market, which previously has been almost impossible not only for technological but also for political reasons.

For the research, several methods are used – analysis of dynamics (of new residential buildings), content-analysis, as well as modelling of variations of electricity circuit is carried out.

Keywords

City competitiveness, smart grids, energy, city sustainable development, Latvia

Biography

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