



EURO  
CITIES



## Sustainable buildings

# Making buildings fit for future

Warsaw's housing sector currently accounts for 65% of total heat consumption in the city. By making both public and private buildings more energy efficient, this could be significantly reduced.

Tackling climate change is important to Warsaw. In 2008, it established a 'Climate Protection Team' to supervise the city's climate actions. Warsaw also hosts the COP19 United Nations conference on climate change in November 2013, which is an opportunity to showcase its green credentials.

### Retrofitting measures

Heat and energy production is the greatest contributor to greenhouse gas emissions in Warsaw. At over 11 million tonnes of CO<sub>2</sub> in 2007, it significantly exceeds emissions from transport or other sources. Warsaw's annual heat consumption currently stands at 13TWh, with 8.5TWh consumed by the housing sector. Warsaw estimates that retrofitting measures could reduce this by more than 2TWh.

Public buildings in Warsaw have been retrofitted systematically since 1990. Rising energy costs and financial incentives mean that homeowners and housing cooperatives are increasingly looking into options for household retrofitting. Grants and credits are available to finance such measures.



We must focus on improving the energy efficiency and sustainability of buildings, for the climate and for the environment, the stability of which is crucial for the welfare of our citizens, and because of rising energy and raw material prices. We in Warsaw are fully committed to face these challenges, taking into account our national and international obligations.

*Leszek Drogosz, director, infrastructure department  
and deputy chairman, Climate Protection Team*

cities in action

September 2013

where: Warsaw, Poland  
what: environment  
when: 1990+

Together with the municipal tram company, Warsaw is developing a 'model building'. The company's main building will be comprehensively retrofitted, featuring renewable energy sources and a green roof. This experience will serve as guidance for future projects.

The city has plans to perform a thermal retrofit of around 20 schools in public-private partnership, recovering the costs through energy savings. Warsaw has become the first Polish municipality to apply for funding through the EU's ELENA financial instrument, which will support the retrofitting of 60 municipal buildings, as well as modernising indoor and outdoor lighting. These measures are expected to considerably improve energy efficiency in the city.

## Low-carbon district

Warsaw has plans for a low-carbon district, inspired by existing models such as Hammarby in Stockholm. This will showcase energy efficient planning, buildings, transport, waste management water and wastewater management, and is the first of its kind in Poland. The city intends to finance the project with municipal and external funding, and hopes to benefit from European co-financing. The project is in its early stages and full implementation is expected to take around ten years. With energy standards updated frequently, it will be a challenge for Warsaw to meet the latest requirements when the project is finalised in 10-15 years.

## EU projects

Warsaw is also taking short term measures through its involvement in several EU projects, for example:

ICE-WISH targets two social housing buildings in Warsaw, comparing their energy performances. Electricity, water and heat consumption and associated costs will be tracked via residents' TVs. Residents are then offered advice on how to reduce consumption. The aim is for a sustainable reduction in water and energy use by 15% without compromising living standards. The city hopes to use the results to encourage landlords to implement energy-saving programmes.

E3SoHo targets social housing buildings in Warsaw, offering holistic solutions for reducing energy consumption, including meters, detectors for light, airflow and humidity, and an ICT-based application providing feedback to tenants on consumption, utilities costs and tailored advice for improving energy efficiency. Warsaw hopes to use this pilot project to showcase ICT for energy efficiency throughout Poland.

Through the EU OPEN HOUSE project, Warsaw was involved in developing and testing a European-wide methodology to assess the sustainability of buildings. It was successfully completed in July 2013 and tested in over 60 sites across Europe, including two in Warsaw.

The city is actively involved in our CASCADE project on local energy leadership, and is taking measures under its 'energy efficient buildings and districts' thematic focus.

Despite huge progress in recent years, Warsaw still considers itself to be in the initial stages of development when it comes to modern building sustainability. The city is demonstrating its commitment to continue improving by learning from existing best practices and by getting involved in both European and national projects.

