EC-LINK 中欧生态城
Europe-China Eco-Cities Link
中欧低碳生态城市合作项目

CASE STUDY

Case Study

Clean Energy

Salzburg, Austria - Revitalization and Heat Supply of Lehen District

Salzburg is situated in western Austria, influenced by continental, alpine and oceanic climate. The north-western district of Lehen counts approximately 15,000 of Salzburg's total 148,000 inhabitants. Revitalization of a rundown urban area with the intention to improve quality of life by creating a district aimed at environmental and social sustainability. Public, semi-public and private companies joined under the lead of the municipality of Salzburg for planning and developing new residential and commercial buildings, based on a political and social vision of the municipality. The project comprises an area of 105,000 m^2 for new buildings with 550 dwellings and refurbishment of buildings and 50,000 m^2 with 623 dwellings. About 20% of the new buildings were planned for commercial use. The criteria of sustainability are as follows:

- Low energy standard for new buildings and as economically as possible for refurbishment;
- High rate of renewable energy supply for the whole area; and
- Energy efficient components in the public electrical applications.

Heat supply concept with solar collector fields, storage tank and micro net for neighborhood scale heat supply, Lehen, Salzburg, Austria

Source: http://www.annex51.org/media/content/files/casestudies/subtaskB/Endbericht_subtaskB

The targets for annual heat demand were set at 20 kWh/m^2 per year for new buildings and 35 kWh/m^2 for existing buildings. The requirement for a high amount of renewable energy resulted in a local (micro) district heat. Hot water DH (65/35ºC) with 2.000 m^2 solar collectors, central storage tank of 200m^3 and electrical heat pump resulting in a solar share of over 30%. Cooling is planned. Compared to natural gas use for heating, the CO_2 emission reduction is calculated at or 92%. The existing electricity is produced with 93% renewable energy, mostly hydroelectric. A backlash happened in spring 2011, when the investor decided for cost reasons to withdraw all innovative energy efficient refurbishment measures and plans now for renovation based on conventional refurbishment standards. The EU CONCERTO program was instrumental to start the project.

References

https://core.ac.uk/download/pdf/82366902.pdf

https://www.concertoplus.eu/reducing-co2/lehen/

Credentials

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