



Energy Efficiency as Important Pillar of the Energy Transition

In the short and medium term, energy efficiency is the biggest, fastest, and most cost-effective option for saving energy and mitigating climate change – it is often referred to as the “first fuel”. Energy efficiency connects the reduction of emissions and consumers’ energy bills with the improvement of energy security and trade balances. Thus, energy efficiency is key to decoupling economic growth from GHG emissions. Hence, it can be regarded as one of two major pillars of the energy transition.

Globally, energy efficiency needs to be improved in different areas, especially in transport, industry and buildings.

CHILE: Cogeneration in Public Hospitals

In Chile, the energy sector (excluding the transport sector) is responsible for almost 40% of the total CO₂eq emissions. The cogeneration potential is approx. 1.000 MW nationwide. The project “Energy Efficiency and Cogeneration in Public Hospitals” was initiated in 2011 and carried out by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and its Chilean counterparts, the Ministry of Energy, Ministry of Health and the Agency for Energy Efficiency (AchEE) as part of the comprehensive IKI portfolio in Chile. Three hospitals were selected to receive new cogeneration plants, designed and tailored to the heat and power demands of each hospital. The most appropriate technical solutions were identified in an international tender process. The project included training of local specialists and technicians in equipment maintenance and the publication of the results. In addition, efforts were made towards assisting in the development of an energy contracting market. Thus, the main objective of the project was not only the installation of the cogeneration

plants themselves, but the nationwide promotion of this innovative technology. Building on the positive results of the project, Chile, supported by IKI, continues to improve energy efficiency beyond hospitals in industry and commerce.

UKRAINE: Energy Efficient Urban District

Ukraine’s energy intensity is one of the highest worldwide. With a share of almost 40% of the overall energy consumption, the building sector is particularly energy-hungry in Ukraine. A more efficient use of available energy resources would bring down costs and increase energy security for the entire country.

The €4.65 million “Energy Efficient Pilot Project” is a Ukrainian-German cooperation supported by IKI and implemented by GIZ between 2009 and 2016.

The main objective is to develop and implement an energy and resource-efficient building concept for new





and existing buildings. The concept is tested in a showcase building in Kiev.

During the construction phase, the building site is used to offer the parties involved, e.g. architects, engineers and decision-makers hands-on training with the newly installed systems such as heat pumps, solar heating and hot water systems or the ventilation with heat recovery.

In the completed building, an energy consumption monitoring system will show the amount of energy and CO₂ reduction achieved due to the energy efficient building standard. Dissemination of these figures is one of the awareness raising activities that accompany the project.

bigEE:

An international network bridges the information gap on energy efficiency in buildings

While information on technologies and policies is abundant, it is scattered widely and difficult to access. bigEE

addresses this problem by summarising knowledge and presenting comprehensive, independent, and high-quality information on energy efficiency in buildings, supporting decision-making and its implementation. bigEE is an international initiative of research institutes for technical and policy advice and public agencies in the field of energy and climate, co-ordinated by the Wuppertal Institute for Climate, Environment and Energy and funded by the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

The web-based knowledge platform bigee.net informs users about energy efficiency options and savings potentials, net benefits and how policy can support achieving those savings. Targeted information is paired with recommendations and examples of good practice. Wuppertal Institute works together with important global stakeholders, including the Beijing China Society for Urban Studies, the Bureau of Energy Efficiency in India and the South African National Energy Development Institute.

To ensure targeted, quick and easy access, information is presented in three different intuitive guides:

- Buildings Guide
- Policy Guide
- Appliances Guide

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Contact:

Kilian Topp

Wuppertal Institute for Climate, Environment

and Energy

Doepfersberg 19

42103 Wuppertal Germany

Phone: +49 (0) 202 24 92 -129

E-Mail: bigee@wupperinst.org · Internet: www.bigee.net

@bigEE_Network

Rainer Schröer

Director Renewable Energy and Energy Efficiency Programme in Chile

Deutsche Gesellschaft für Internationale

Zusammenarbeit (GIZ) GmbH

Marchant Pereira 150

Santiago, Chile

Phone: + 56 2 23068602

E-Mail: giz-chile@giz.de · Internet: www.4echile.cl/

Christiana Hageneder

Project Director, Deutsche Gesellschaft für Internationale

Zusammenarbeit (GIZ) GmbH

16b, Antonovycha (Horkoho) st.,

01004 Kyiv, Ukraine

Phone: +380 44 594 0760

E-Mail: christiana.hageneder@giz.de

Internet: <http://epp.org.ua/page/en/>



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