



BUILDING BASELINES FOR ENERGY EFFICIENCY TRANSFORMATION

INTRODUCTION: Buildings are responsible for more than one-third of the total global energy use and associated greenhouse gas emissions in society. Eighty-five percent of the energy used is consumed during the operational phase of the building. With greater use of proven and commercially available technologies, the energy consumption in both new and existing buildings can be cut by 30-50 percent without significantly increasing the investment costs of new construction or renovation projects. A key barrier to improving energy efficiency in buildings is a lack of consistent definitions and tools to identify and quantify the performance benefits from design, investment and construction of energy efficient buildings, and a lack of linkages between different stages and stakeholders in the building life cycle. A global index of standards, rating systems, and innovation incentive instruments is necessary to break the stagnation in market uptake of energy efficient buildings in both developed and developing countries.

SOLUTION: UNEP's *Building Baselines for Energy Efficiency Transformation* (BBEET) project recognizes that the building sector is not able to move towards more energy efficient buildings without support from policy makers. Furthermore, an effort to overcome the fragmentation of governmental and private-sector approaches to adapting to and mitigating the climate impacts of the building sector is essential. The project will establish and disseminate a global reference guide for developing generic but robust definitions, methodologies, and tools for supporting the development of energy-efficient and sustainable buildings.

The creation of such a framework will pave the way for buildings efficiency efforts to be included in the global carbon market. It will also provide a platform for local-global learning and interaction in processes linking local needs and experiences with global processes such as climate change reporting protocols and international financial mechanisms.

This project builds upon studies produced by UNEP's Sustainable Buildings and Climate Initiative (SBCI), which works closely with other leading international sustainable building initiatives.

DELIVERING RESULTS: Objectives of the project include:

- Assessing the current state of building energy efficiency in a number of countries characterized by different climates, levels of development, and cultures.
- Developing global indexes of minimum performance baselines and progressive targets for each building type by country and city/region measured in kilowatt hours per square meter per day, or kWh/m²/day.
- Using the index to further develop a global reference guide for national and municipal policies, including technology and standards descriptions and recommendations.
- Adapting the global reference guide to be applicable to specific countries, regions, and cities.
- Identifying both national and local policies that are consistent with the global reference guide and offer guidance to decision-makers and to individual stakeholders on what set of program policies and procedures would best fit their building portfolios.
- Promoting global dissemination of information related to buildings efficiency through UNEP's partnerships with UN-HABITAT, the World Bank, and the Cities Alliance as well as through networks such as the International Council for Local Environmental Initiatives, Large Cities Climate Leadership Group (C40), and United Cities and Local Governments (UCLG).

BUDGET: Total cost of this project is estimated at \$7,000,000. UNEP has already received expressions of interest from the World Bank and Governments of Norway and Finland.