

Scaling up Sustainable Energy Management Systems (EnMS) in Pakistani Cities (REEE-Scale II)

Supporting the Pakistani cities to improve their energy efficiency through implementing energy management systems

The Challenge

Pakistan is undergoing rapid urbanisation, with around 40% of its population living in cities. By 2030, this percentage is projected to increase to 50% of the estimated 270 million. This shift places substantial pressure on municipal services in around 100 cities with more than 100,000 inhabitants. Municipalities are challenged by insufficient income and cost pressures, exacerbated by high energy costs due to inefficient usage. Consequently, energy costs account for approximately 40-50% of the operational costs for water and sanitation services.

To address these challenges, the National Energy Efficiency and Conservation Policy proposes implementing Energy Management Systems (EnMs) in cities. However, the corresponding action plan lacks specific implementation measures.

Furthermore, although recognised as equal opportunity employers, municipal organisations still have an underrepresentation of women. Urbanisation and increased media exposure have raised awareness; however, progress towards gender equality is hindered by entrenched traditional norms and unsafe working conditions. Additionally, the slow pace of digitalisation and automation is limiting opportunities for more efficient and less physically demanding jobs.

Our Approach

With the support of the German development cooperation, REEE Scale II is supporting Pakistani cities to implement systematic energy management in partner municipalities by targeting experts

Project name	Scaling up Sustainable Energy Management Systems (EnMS) in Pakistani Cities (REEE-Scale II)
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and managers at national, provincial, and local levels. National Energy Efficiency and Conservation Authority (NEECA) serves as the lead executing agency for the project. Additionally, the project collaborates with intermediaries, including provincial energy agencies such as the Punjab Energy Efficiency and Conservation Agency (PEECA), and associations like the Pakistan Engineering Council (PEC), to anchor EnMs in municipal organisations and promote energy efficiency and organisational framework development. The project supports the implementation of systematic energy management in Pakistan's municipal organisations through the following measures:

- 1) Strengthening the organisational capacities of Pakistan's municipal bodies to establish systematic energy management.
- 2) Enhancing the professional competencies of municipal experts and managers in systematic energy management.
- 3) Providing design options for improved frameworks in municipal energy management, including gender-responsive approaches, to stakeholders in energy and municipal development in Pakistan.



Pg. 1, Left: Water treatment plant at CDA premises, Islamabad

Right: Study Tour to Germany to learn best practices.



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Pg. 2, Left: Energy management System (EnMS) Trainings in Nathia Gali in previous phase i.e., REEE Scale

Right: Operational Planning Workshop (OPW) for REEE Scale II

Expected Achievements

Integration of Systematic Energy Management in Municipal Organisations

Through REEE-Scale II, municipalities are expected to adopt systematic energy management (EnM) practices, with a focus on enhancing organisational capacities to implement standardised Energy Management Systems for the effective planning and execution of energy efficiency measures. The project aims to establish an organisational framework tailored to the specific needs of municipal organisations, aligned with ISO standards 50001 and 50005.

By leveraging digital tools, municipalities will improve data availability and reliability, enabling tailored recommendations for embedding energy management practices within their structures and processes. Technical advice will support the formulation of development measures and financial mechanisms in partnership with banks and financing institutions, facilitating support for energy management initiatives.

Additionally, the project seeks to strengthen NEECA's human resource and organisational capacity for sustainable energy management. Ultimately, this initiative aims to drive consistent and effective EnM practices across partner municipalities, contributing to a robust and sustainable energy management system in Pakistan.



Capacity Building of Energy Professionals

With a foundation built on previous support from the German development cooperation, the project is set to develop essential knowledge products, learning opportunities, and training materials necessary for the introduction and implementation of EnMS in urban areas. Selected intermediaries in the energy sector, municipal bodies, and private organisations will gain the tools needed to effectively disseminate EnMS-related knowledge and services to municipal stakeholders. The promotion of horizontal learning will further encourage knowledge transfer and experience-sharing among municipal organisations through existing networks, all while emphasizing gender-responsive strategies. Additionally, NEECA will be supported in organising a national conference that will facilitate focused discussions among government, academia, private sectors, and municipalities on energy management.

Promoting Gender Mainstreaming in Energy Management

An internship program is envisaged specifically for women engineers, designed to offer valuable hands-on experience and to promote the participation of women in the EnM sector. The digitalisation of tasks and operations also aims to create more women-friendly working conditions. Furthermore, the project will put forward recommendations for gender-inclusive approaches in the workplace to promote equitable representation of women in decision-making roles within the sector.

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