

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

Supporting Pakistani cities to improve their energy efficiency through implementing systematic energy management

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 supply and sanitation services.

To address these challenges, the National Energy Efficiency and Conservation Policy (NEECP) proposes implementing Energy Management Systems (EnMS) in cities. However, the corresponding NEEC Action Plan (2023–2030) 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. 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 Federal Ministry for Economic Cooperation and Development (BMZ), REEE Scale II is supporting Pakistani cities to implement systematic energy management (EnM) in partner municipalities by targeting experts and managers at national, provincial, and local levels.

Project name	Scaling up Sustainable Energy Management Systems (EnMS) in Pakistani Cities (REEE-Scale II)
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)
Project region	Pakistan, South Asia
Lead executing agency	National Energy Efficiency and Conservation Authority (NEECA)
Duration	04.2024 – 03.2028

The National Energy Efficiency and Conservation Authority (NEECA) serves as the lead executing agency for the project. Project also collaborates with intermediaries, such as provincial energy efficiency agencies, to anchor EnMS in municipal organisations and to promote the development of energy efficiency and organisational frameworks through tailored recommendations.

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 implement systematic energy management.
2. Enhancing the professional competencies of municipal experts and managers in systematic energy management.
3. Providing design options for improved framework conditions to promote municipal energy management, including gender-responsive approaches, to municipal stakeholders in Pakistan.



Pg. 1, Left: Collecting data at a tubewell pumping station to establish the municipal energy baseline.

Right: On-site pump assessment with international experts.



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Pg. 2, Left: Engineering trainees collecting energy consumption data of the vehicle fleet

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 being supported to adopt EnM practices, with a focus on enhancing organisational capacities to implement standardised EnMS for the effective planning and execution of energy efficiency measures. The project aims to establish an organisational EnM framework tailored to the specific needs of municipal organisations.

By leveraging a systematic approach, municipalities are being supported to improve data availability and reliability. This is helping to develop tailored recommendations for embedding EnM practices within their structures and processes. Municipal organisations are receiving assistance in conducting techno-economic feasibility studies and in the development of bankable proposals, facilitating support for EnM initiatives.

Additionally, the project seeks to strengthen organisational capacities by developing 11 framework recommendations to promote EnM in municipalities. These design-option recommendations will include monitoring and evaluation interventions, benchmarking systems, and financing mechanisms for promoting EnM, to drive consistent and effective EnM practices across partner municipalities, ultimately contributing to a robust and sustainable EnMS in Pakistan.

Capacity Building of Energy Professionals

With a foundation built on previous support from the German development cooperation, the project is developing essential

knowledge products, learning opportunities, and training materials necessary for the introduction and implementation of EnMS in urban centres. The Capacity Readiness Assessment for EnMS implementation is being conducted.

Selected municipal partners are receiving the tools needed to effectively implement tailored EnMS-related knowledge within their organisations, and customised capacity-building measures are being conducted based on the Capacity Readiness Assessment of the municipal partners. The promotion of horizontal learning by engaging municipal experts and managers will further support the transfer of knowledge and experience among municipal organisations through existing networks. The aim is to strengthen the capacities of municipal management to address identified regulatory gaps through recommendations for improved regulatory frameworks and enhanced institutional coordination mechanisms. The proposed solutions and framework options will be advanced in coordination with NEECA through national-level multi-stakeholder engagement involving government, academia, the private sector, and municipal institutions to strengthen institutional alignment and promote the uptake of best practices in municipal energy management.

Promoting Gender Mainstreaming in Energy Management

The project supports female engineers in developing their capacities in energy management to enhance their career prospects in Pakistan's energy sector. This includes strengthening technical competencies in municipal EnM, building career-oriented soft skills, and raising awareness of workplace rights and reporting mechanisms. In addition, gender-responsive strategies are being integrated into the municipal EnM framework to promote women's participation and employment in the energy sector.



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