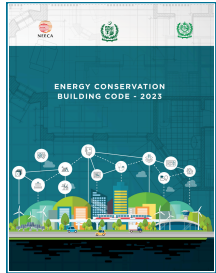


Transforming Pakistan's Building and Construction Sector for a Sustainable Future

1 Stronger Policies for Sustainable Buildings

- Supported the National Energy Efficiency and Conservation Authority (NEECA) in revising the Building Code of Pakistan to incorporate energy efficiency and sustainable construction standards.
- Federal Cabinet approved and officially notified the **Energy Conservation Building Code (ECBC-2023)**.
- National rollout of ECBC-2023 initiated through launch events in **Islamabad (2024)** and **Sindh (2025)**.
- Local Adoption:
 - Peshawar Development Authority (PDA)**: ECBC compliance made mandatory through a Gazette notification.
 - Capital Development Authority (CDA)**: Developed a Net Zero Roadmap and a Building Rating System, currently under review.
 - Sindh Building Control Authority (SBCA)**: Under the Sindh Green Building Initiative (SGBI), dynamic stakeholder engagement and capacity building were promoted. A review committee, formed by the Director General SBCA, submitted recommendations for by-law amendments.

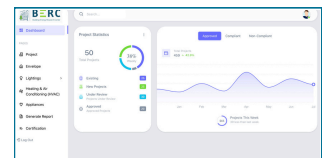


Energy Conservation Building Code (ECBC-2023)



2 Knowledge, Tools and Skills for Change

- Digital Tools for ECBC-2023 Implementation
 - Central Building Database Tool**
 - ECBC-2023 Compliance Checking Tool**
 - Life Cycle Analysis Tool**
 - Building Load Calculation Tool**
- Over **2,400** professionals trained, including architects, engineers, regulators, private sector representatives, and development practitioners.
- 11** technical webinars conducted on topics such as alternative construction materials and Passive House design, alongside multiple in-person trainings held across KP, Punjab, Sindh, and GB.
- Hands-on learning through demonstrations of **Rammed Earth Construction** and other low-carbon and sustainable techniques, including unburnt clay bricks.
- Two-week training on Implementation Tools for ECBC-2023 organised at UET Baragali Campus, equipping engineers, planners, and regulators with digital tools for energy-efficient building design.
- Published three **Life Cycle Analyses (LCAs)** for 5 Marla, 10 Marla, and 1 Kanal residential units, measuring embodied carbon and lifetime energy use in Pakistan's housing sector.



ECBC-2023 Compliance Checking Tool



3 Showcasing What's Possible

- Conducted **techno-economic feasibility** studies for 5 Marla, 10 Marla, and 1 Kanal ECBC-2023 compliant houses in Paradise Housing, Nowshera – demonstrating costs, savings, and payback periods.
- Carried out **energy modelling** for the Rehman Baba Residential Complex (three 12-storey towers) for the Pakhtunkhwa Housing Authority (PHA) to assess conservation measures and cost-effectiveness.
- Developed the conceptual design of the **"Power Tower"** for PPIB, Ministry of Energy – Pakistan's flagship model of a sustainable and energy-efficient office building.



Conceptual design of the "Power Tower"



About the Project

Pakistan’s rapid urbanisation has created an urgent demand for housing while contributing significantly to energy consumption and greenhouse gas emissions from the construction and building sectors.

To address this challenge, the project “Transformation of the Construction Sector to Promote Energy Efficiency in Buildings in Pakistan (Bauwende)” supports the Government of Pakistan in transitioning towards sustainable, low-carbon construction practices.

Implemented by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the project strengthens policy frameworks, builds stakeholder capacities, and promotes data-driven decision-making for energy-efficient building design and materials.

By embedding sustainability in policies and demonstrating practical solutions, the project aims to reduce emissions, optimise energy use, and foster a climate-resilient and resource-efficient construction sector in Pakistan.



Contribution to SDG’s



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