



## THE CHALLENGE

Pakistan faces multiple challenges to its economic and social growth, which are increased by its worsening energy crisis. Pakistan relies on oil, natural gas, and liquefied petroleum gas, coal, hydroelectricity, nuclear energy and imported electricity. Due to insufficient generation capacity, Pakistan often has an energy deficit of 5,000 MW during the summer season, resulting in rolling blackouts. In addition, the energy sector is the most significant contributor to GHG emissions - in 2008, Pakistan's national GHG inventory was 310 MtCO<sub>2</sub>e totaling 157 MtCO<sub>2</sub>e (over 51% of the country's total emissions) in 2007 to 2008. Pakistan's growing population of 180 million is expected to increase demand for power to 306,797 GWh by 2020, and 889,583 GWh by 2035, most of which is likely to be sourced from the country's vast coal reserves. Energy related emissions are expected to be 64% of total emissions in 2050, evidence that the energy sector will become increasingly carbon-intensive without intervention.

Nevertheless, recent approval of the National Energy Efficiency and Conservation (EE&C) Bill by the National Assembly in February 2016 has clearly underlined the commitment of the Government of Pakistan in strengthening institutions and accelerating mechanisms and procedures for the effective conservation and efficient use of energy in Pakistan.

## WHAT WE DO

United for Efficiency Center of Excellence team of experts, following the U4E Integrated Policy Approach, provide technical assistance to Pakistan in order to achieve the promotion, demonstration, deployment, and transfer of innovative low-carbon technologies, particularly high efficiency and usage-controlling lighting technologies.

The Project will seek to achieve concrete objective, such as:

- Development of a national efficient lighting policy and strategy which contains a regulatory framework for MEPS and labelling.
- Development of process and procedures to ensure compliance with lighting MEPS and labeling, including capacity building programmes for national stakeholders (ex. Custom officers and industrial sector).
- Implementation of an operational framework to establish a collection scheme, recycling facilities and/or sound disposal systems, to ensure the sustainable end of life treatment of spent lamps.
- Promotion of regional cooperation and harmonization for lighting products.
- Development of a strategy and administrative and operational procedures to establish a Revolving Loan Fund, including the provision of technical assistance for capacity workshops for On-lending entities for the loan programme.
- Design and provision of technical assistance for the implementation of pilot demonstration programs for local appropriate LEDs and lighting controls.

## PROJECT AT-A-GLANCE

Delivering the Transition to Energy Efficient Lighting in Residential, Commercial, Industrial, and Outdoor Sectors in Pakistan



### GEOGRAPHICAL SCOPE

National project

Pakistan



### TARGETED PRODUCT



<b>STATUS</b> ACTIVE	<b>TEAM LEADER</b> Paul Kellett paul.kellett@un.org	<b>IMPLEMENTING PARTNER</b> United Nations Environment Program
<b>STARTING DATE</b> FEBRUARY 2019	<b>DONOR</b> Global Environmental Facility	<b>PARTNERS</b> National Energy Conservation Centre (ENERCON), Ministry of Water & Power (MOPC) and International Institute for Energy Conservation (IIEC)
<b>CLOSING DATE</b> NOVEMBER 2020		

### TOTAL PROJECT COST



## KEY ACHIEVEMENTS TO DATE

From tackling current barriers and based on U4E Country Assessments, the reduction potential range in electricity consumption, monetary savings and GHG emissions mitigation in Pakistan due to a market transformation to energy efficient lighting – compared with current values, with a Best MEPS Scenario (2016 levels) – is very significant by 2030:

Annual Savings:

**4.1 TWh**  
on annual electricity savings  
(Avoided investment costs for  
2 power plants of 500MW)

**2.2 megatonnes**  
of CO<sub>2</sub> avoided annually  
(equivalent to more than  
1,2 million cars)

Over  
**\$ 450 million**  
savings in annual electricity  
costs

## UN ENVIRONMENT'S ROLE



United for Efficiency provides developing and emerging economies through their in-house experts and specialized partners with tailored technical support to transform their markets by accelerating the adoption of energy-efficient lighting, appliances, and equipment. Currently it is present in more than 30 countries worldwide. Based on each country's circumstances, United for Efficiency works with any of the following products: lighting, refrigerators, room air conditioners, motors and transformers - 5 products that together consume over half of the world's electricity.

By following United for Efficiency's Integrated Policy Approach and covering crucial elements from the transformational pathway, such as Standards and Regulations; Labelling and Communication strategies; Financial Mechanisms; Monitoring, Verification and Enforcement; and Environmental Sound Management, countries achieve a lasting market transformation, allowing monetary savings on their utility bills, helping businesses thrive through greater productivity, enabling utilities to meet growing demand for electricity, and assist governments in reaching their economic and environmental ambitions. Such support is available at three levels: Global, Regional and National providing several tools and resources to support committed countries in their efforts, such as Policy Guides, multiple assessments (country level, street lighting, etc), regional policy roadmaps and harmonization process recommendations, development of training for policymakers and practitioners and National action plan implementation support.

