# Pakistan Energy Transition Charter

Pakistan Renewable Energy Coalition
"Together for a Renewable Powered Pakistan"

RENEWABLES FIRST

**Pakistan's current energy crisis**, which has resulted in widespread load shedding and power unavailability is nothing new for the country. The country has repeatedly grappled with insufficient power production and a weakening economy due to a continued reliance on imported fossil fuels. Things are especially worse right now as Russia's invasion of Ukraine continues relentlessly, and the sanctions imposed on Russian oil, gas and coal leave an impact on global commodity markets. Emerging economies like Pakistan are hurt the most due to these circumstances, as rising fuel prices not only hurt their ability to procure fuel, but competition against other affluent importing countries results in them being priced out of competition.

Pakistan paid $17 bn for its oil and gas imports from July 2021 till April 2022. LNG imports have alone cost up to $4bn in these 10 months and are slated to reach $5 bn by the end of the current fiscal year. Pakistan's heavy reliance on the spot market for LNG has led to cargoes being procured upwards of USD 25/mmbtu. Since fuel costs are passed through items, this has led to a direct impact on the cost of power generation. According to the country's merit order for power generation, fuel costs for RLNG plants alone accounted for PKR 16.5/KWh. Plants dependent on imported coal have experienced exorbitant surges in fuel prices as well as the cost of South African coal (Pakistan's prime import destination for coal) hovers around USD 400/ton. Sahiwal coal reportedly produced power at a fuel cost of PKR 28.5/KWh in April. As a result, the national electricity regulator NEPRA has been forced to raise the national average electricity price from Rs. 16.91/KWh to Rs. 24.81/KWh.

Meanwhile inherent problems within the power sector due to structural inefficiencies such as unbudgeted subsidies, power theft and cash flow shortages within electricity distribution utilities lead to a consistent build-up of circular debt which is now surpassing PKR 2.5 trillion. In parallel unaccounted for gas losses and diversion of expensive LNG to the domestic sector has also led to the creation of circular debt in the gas sector which currently stands at PKR 1.5 trillion.

Rising fuel prices not only result in high energy bills but also lead to a widening trade deficit which is now the bane of Pakistan's economy. The fact that this situation could have been avoided had energy diversity and a shift to cleaner fuels been introduced in a timely manner is lamentable. Over 65% of Pakistan's current electricity generation is dependent on imported fossil fuels. Over 90% of generation capacity added over the last two decades has been thermal in nature while renewables have been put on the backburner, so much so that only 3% of the current power generation comes from renewable energy and no solar and wind energy capacity has been added over the last two years.

We, the Renewable Energy Coalition, are cognizant of the fact that solar and wind energy is the least costly form of power generation in the country and vastly superior to fossil fuels in terms of environmental benefits. With minor upgrades to the grid, almost 30% of renewable energy-based power generation can be accommodated into the power system.

**Therefore, we have come up with a list of recomendations for the government to implement which could alleviate the current energy crisis in the country and lead to a cleaner energy future for pakistan**

## Short-term

- Redefine and reassess targeted subsidies for both fuel and electricity
- Initiate a methodology and program to price carbon in Pakistan
- Revive and implement the exemptions of sales tax around renewable energy equipment and auxiliaries
- Implement a gas supply moratorium for captive plants in Pakistan, bringing them instead to the national grid and boosting demand to lower the power tariff
- Ensure True least-cost new generation through the IGCEP
- Optimise RE portfolio within the IGCEP by factoring in schedule and cost overruns as well as predicted weather patterns and climate change effects in Pakistan
- Reduce dependence on imported fuel generation by mandating growth of RE in the IGCEP
- Ensure timely implementation of auctions in Pakistan
- Finalise Wheeling charges for Bulk Power Consumers
- Modify and improve SBP RE financing scheme
- Implement WACOG pricing as approved by Government of Pakistan
- Strengthen environmental tests for the grant, review, and renewal of generation licenses and enhance the standards, monitoring, and compliance protocols for existing plants to reflect international best standards.
- Development of a Hydro power policy, where priority should be given to small scale hydro and run of the river projects over large hydropower projects

## Medium-term

- DISCOs management through private sector, under the CTBCM should be mandated to reduce technical and commercial losses and let the business flourish under NEPRA regulations and incentives
- Develop a Decarbonization Plan for Pakistan targeting all energy sectors with short, medium and long term goals and targets
- Develop a Hydrogen Strategy and Plan to establish Pakistan as an export hub around Hydrogen economy
- Replace imported fuel-based plants with wind and solar as per the ARE Policy 2019 Displacement clause
- Establish a reverse auction mechanism for early retirement of coal fleet of Pakistan
- Implement the moratorium around coal power plants in Pakistan in true letter and spirit, including moving away from coal mining and expensive and polluting technologies such as CTG and CTL
- Incorporate and complement climate change policy with elements of ARE targets and goals
- Incorporate environmental, health and social costs, carbon emissions and pricing as a metric in generation grid planning through the IGCEP
- Increase public investment in climate change mitigation and cut environmentally harmful subsidies
- Expand and implement sustainability and environment reporting obligations as per global standards and regulations
- Raise expansion goals for renewable energy
- Introduce a carbon floor price in the electricity sector
- Develop RE parks in Pakistan with evacuation and transmission mechanisms
- Introduce comprehensive land acquisition, rehabilitation, and resettlement policies at provincial and federal levels in line with international best standards for affectees of energy projects
- Accelerate and standardise approval and legal procedures around RE projects
- Introduce PV obligation in new government and commercial buildings
- Adapt network expansion to climate goals
- Simplify rules and ensure prosumers through effective regulation and policies

## Medium-term

- Redesign existing gas infrastructure to make it hydrogen ready
- Ban gas heaters and geysers by providing electric and solar alternatives
- Promote investment in climate change mitigation and high efficiency technologies through investment grants and incentives
- Develop circular economy strategy including the introduction of product and process specific sustainability criterions
- Incentivize flexibility within the existing thermal fleet of Pakistan
- Establish methane emission reduction targets through a dedicated policy around Methane
- Electrify passenger cars and provide required expansion of charging infrastructure
- Establish low emission zones in urban centres and cities
- Prioritise mass transport in urban centres by disincentivizing private vehicle ownership and promotion of urban transportation networks
- Provide toll and taxation relief for zero emission vehicles
- Electrify road kilometres for mass transport vehicles
- Integration of green hydrogen for the production of green ammonia in industries, particularly in fertiliser industry
- Direct reduction with hydrogen and smelting in the electric arc furnace for Steel Industry
- Heat and steam generation from power to heat and electrification for low heat processes
- Development of a Chemical recycling plan and strategy
- Improve local public transport by providing dedicated incentives and networks
- Battery storage to supply electricity during peak demand hours specially 6-10pm

## Long-term

- Establish climate neutrality target for the building sector
- Raise energy standards for new and old buildings
- Incentivize climate friendly agriculture
- Develop an agricultural land conservation strategy
- Identification and promotion of alternative binders to cement
- Accelerate domestic market ramp up of Hydrogen as a fuel and feedstock for industry
- Work on alternative fuels for replacing gas and coal
- Transition mobility networks in towns and cities around carbon free vehicles and modes of transportation
- Abolish privileges around air transport through taxation measures
- Electrify rail network across the country
- Create lead markets for green materials in Pakistan
- Develop a Biomass and biofuels strategy
- Provide Green ammonia for fertilisers