

How Can Pakistan Transition Towards Renewable Energy?

Setting the Context

In 2023, fossil fuels made up

59.4%

of Pakistan's installed fuel-wise capacity

Source: Pakistan Economic Survey, 2024

Environmental Consequences

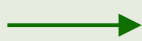
Disrupts Pakistan from Achieving

50%

Reduction in Carbon emissions by 2030

Source: Pakistan's Updated Nationally Determined Contributions, 2021

\$1.182
billion



\$48.5
billion

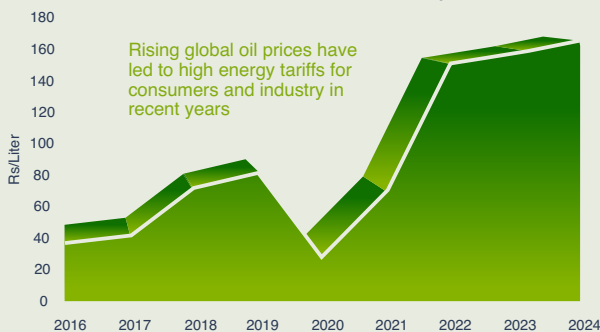
petroleum products imported

total imports

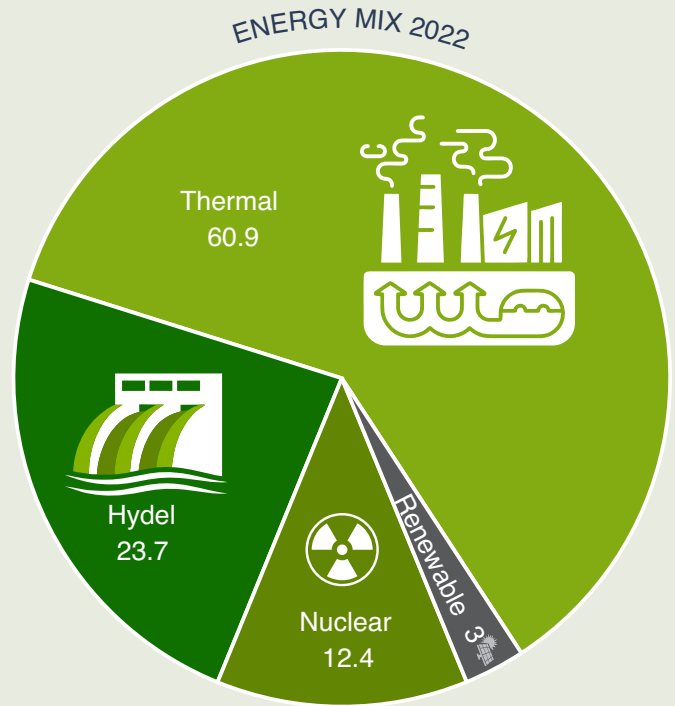
Source: Business Recorder, 2023

Pakistan's Oil Prices

International Price Volatility



Source: Oil and Gas Regulatory Authority, 2024



Source: Ministry of Energy (Power Division), 2022

■ Thermal ■ Hydel ■ Nuclear ■ Renewable

Approximately

2%

of Pakistan's annual GDP is spent on capacity payments

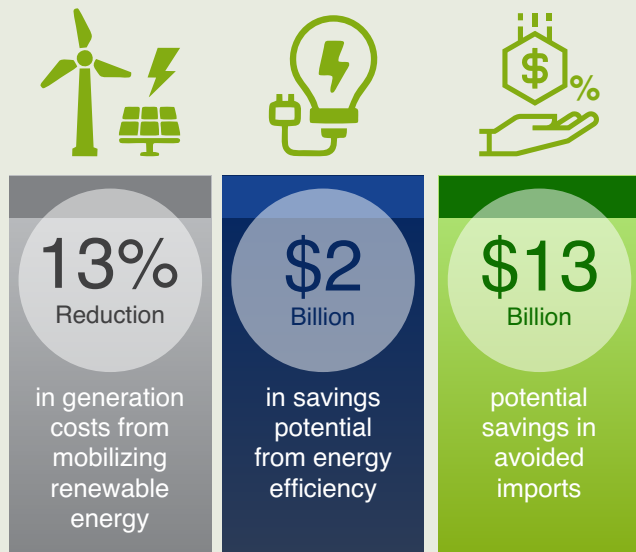
Source: NEPRA, 2022

Key Challenge for the Energy Sector

Pakistan is locked into multiple long term (up to 2030 or 2040) and fixed Independent Power Producer (IPP) contracts with steep tariffs. These contracts lack flexibility in terms of innovation, market shifts, or technological advancements in energy generation. The government remains obligated to purchase power from IPPs and make fixed capacity payments, leading to a fiscal drag.

Potential to Go Green

Potential Benefits From Sustainable Energy



Source: Achieving Sustainable Energy, World Bank Group, 2023

47% of Pakistan's electricity consumption comes from the residential sector



Pakistan receives abundant sunshine

7-8
HOURS/DAY

By utilizing **0.071%** of its total area for solar power generation, Pakistan could have met its **2020** electricity demand.

Source: World Bank, 2020

Enabling the Green Transition - A Way Forward

