

# Clean & Green Shining Pakistan

## Just Energy Transition from Fossil Fuels to Renewable Sources

### Suggestions for Political Parties



## Affordable and Reliable Renewable Energy for Everyone

Reliable, clean, affordable, and nonstop energy supply is crucial for sustainable economic development. Over the years, Pakistan's economic performance has been severely affected due to energy shortages and adverse balance of payment situation, largely due to high energy related import bill. Moreover, Pakistan's high dependence on fossil fuels to meet its energy needs contributes to climate change, occurrence of more frequent natural disasters and environmental degradation, as evident from widespread smog in winters and deteriorating air and water quality with serious implications for peoples' health. According to the Air Quality Life Index 2021, the average life expectancy of Pakistani citizens has been reduced by average 3.8<sup>1</sup> years due to air pollution. As for the climate change, it is largely attributed to higher reliance on fossil fuels, and it has contributed to extreme weather events including the 2010<sup>2</sup> and 2022<sup>3</sup> floods in Pakistan, which resulted in loss of hundreds of precious lives and damages to crops and properties worth billions of dollars. Currently, Pakistan's contribution to global emissions of greenhouse gases is less than one percent, yet it is highly vulnerable to climate change induced adverse impacts. If effective steps are not taken to reduce reliance on fossil fuels, Pakistan's share in overall emission of greenhouse gases will gradually increase, especially if it was able to achieve higher growth in the economy. This situation calls for short-term and long-term strategic planning to enhance country's dependence on renewable sources of energy to mitigate climate change, improve environment, reduce import bill, and ensure uninterrupted supply of economical, clean, and green energy for sustainable economic growth.

It has been estimated that Pakistan has the viable potential to generate 120,000 MW<sup>4</sup> electricity through wind power, whereas the potential to generate solar power is colossal. According to the World Bank<sup>5</sup>, utilizing just 0.071 percent of the country's area for solar power generation can meet Pakistan's current electricity demand. Pakistan also has the usable potential of generating about 44,334 MW annually<sup>6</sup> through hydro plants. The overall installed shares of renewable energy comprised of hydro, solar PV, wind, and bagasse-based plants is 34%, and 66% share is from thermal projects consist of local gas, local coal, imported coal, RFO, RLNG and nuclear. However, the output of renewable energy was only 29% in 2021-22. Among the renewable electricity through solar, bagasse, and wind plants, the overall energy mix output was barely 4%. Several studies suggest that, despite seasonal variations and with the moderate upgradation of grid system and adopting policy of local power generation transmitted and dispatched locally, the share of solar, bagasse, and wind energy can be easily increased to 35%. With this increase 1 billion \$ can be saved annually. Therefore, it is important that Pakistan optimally benefits from its abundant renewable energy sources to enhance its energy security, improve balance of payment and address climate change and environmental degradation. In this background, the political parties must commit in their manifestos to:

---

<sup>1</sup> [You searched for Pakistan - AQLI \(uchicago.edu\)](#)

<sup>2</sup> [NDMA Annual Report 2010 - \(60pc- mb\)](#) (Table, 2.3 & 2.4, Page-14)

<sup>3</sup> [Pakistan PDNA Main Report - Final.pdf](#) (Table-1, Page-14)

<sup>4</sup> [Wind speed pattern data and wind energy potential in Pakistan: current status, challenging platforms and innovative prospects | SpringerLink](#)

<sup>5</sup> [Expanding Renewable Energy in Pakistan's Electricity Mix \(worldbank.org\)](#)

<sup>6</sup> [Pakistan \(hydropower.org\)](#)

- Devolution of power generation, transmission, and distribution in accordance with articles 157 of the constitution.
- Increase the share of green and clean renewable energy (excluding large hydro plants) to at least 35% by 2030 in the overall annual energy generation in the country.
- Facilitate households, public and private offices, businesses, industries, educational institutions and agricultural tube wells through subsidies and concessional bank loans in adopting renewable energy solutions.
- Ensure development and implementation of energy efficient building codes to conserve energy and promote climate change adaptation.
- Develop and enforce energy efficiency standards for all electric and gas appliances.
- Incentivize local exploration, mining and refining of relevant minerals and manufacturing of equipment (e.g., solar panels, lithium batteries etc.) to reduce costs for consumers and dependence on imports, and to promote local industry and employment.
- Achieve 100 percent electrification of villages and neighborhoods either through grid or off-grade solar, wind or small hydroelectric power plants.
- Facilitate transfer of existing brick kilns to zig-zag technology.

One of the major consumers of energy is the transport sector with extensive reliance on diesel, petrol, and gas. It is estimated that the total number of registered vehicles in Pakistan was 6,628,063<sup>7</sup> in December 2021, while around 250 thousand new vehicles are registered every year. Among the registered vehicles, only 8000 are electric. The world is rapidly moving toward electric vehicles because they are far more energy efficient compared to vehicles based on combustion engines and cause the least impact on the environment. The political parties must commit to:

- Facilitate transition of electric vehicles through appropriate policy measures including reduced import duties and registration fee and incentives for local manufacturing., increase the electric vehicles account up to 30%<sup>8</sup> of the new vehicle's purchases by 2030.
- Ensure strict enforcement of vehicle fitness certification to conserve fuel consumption and protect the environment.

In their manifestos, political parties must acknowledge that transition to renewable sources of energy could be disruptive, especially for the poor and vulnerable communities. It is, therefore, important that they explicitly commit to:

- Ensure that energy transition to renewable sources will be carried out in a fair, just and sustainable manner so that it would not adversely impact the poor, women, and marginalized communities by disrupting their livelihoods, work environment or access to affordable energy.
- Among the viable renewables sources the final selection must be finalized with the consensus of local communities, provincial governments, and technical experts.

---

<sup>7</sup> [Pakistan Number of Registered Vehicles | Economic Indicators | CEIC \(ceicdata.com\)](#)

<sup>8</sup> [Pakistan's National Electric Vehicle Policy: Charging towards the future - International Council on Clean Transportation \(theicct.org\)](#)

Centre for Peace and Development Initiatives (CPDI) is an independent, non-partisan and a not-for-profit civil society organization working on issues of peace and development in Pakistan. It is registered under section 42 of the Companies Ordinance, 1984 (XLVII of 1984) later substituted by Companies Act 2017. It was established in September 2003 by a group of concerned citizens who realized that there was a need to approach the issues of peace and development in an integrated manner. CPDI is a first initiative of its kind in Pakistan. It seeks to inform and influence public policies and civil society initiatives through research-based advocacy and capacity building in order to promote citizenship, build peace and achieve inclusive and sustainable development. Areas of special sectoral focus include promotion of peace and tolerance, rule of law, transparency and access to information, budget watch, media watch, local government, climate change, election watch and legislative watch and development.



Centre for Peace and  
Development Initiatives

+92 51 237 51 58-59, 431 94 30

CPDI.Pakistan

CPDI\_Pakistan

CPDI\_Pak

CPDIPakistan2003

A Company setup under section 42 of the Companies Ordinance, 1984

[www.cpdipakistan.org](http://www.cpdipakistan.org)

