Policy Brief

# Pakistan–China Green Energy Partnership: Driving Sustainable Transformation Together

## Introduction

Energy transformation is at the heart of Pakistan’s economic resilience and environmental survival. At the same time, China has emerged as a global leader in renewable energy technology, innovation, and financing. Together, Pakistan and China have a unique opportunity to create a Green Energy Partnership that not only strengthens Pakistan’s energy security but also advances China’s vision of sustainable connectivity under the Belt and Road Initiative (BRI) and the CPEC Green Corridor.

This collaboration is not just about electricity—it is about shaping a future of shared prosperity, climate resilience, and regional stability.

## Why Energy Transformation with China?

* China’s Global Leadership: China accounts for one-third of global renewable investment, and is a leader in solar, wind, hydropower, and battery technologies.
* Pakistan’s Urgent Need: Rising import bills, circular debt, aging infrastructure, and climate vulnerability demand a low-carbon shift.
* Mutual Benefits: For Pakistan – energy security, industrial growth, reduced import dependence, and climate resilience. For China – expansion of green technology markets, CPEC Phase-II leadership, and climate cooperation showcase.

## Priority Sectors for Pakistan–China Cooperation

* Solar & Wind Power: Joint development of solar parks and expansion of wind corridors with Chinese technology and financing.
* Hydropower & Water-Energy Nexus: Modernization of dams and small hydel projects for rural electrification.
* Energy Storage & Smart Grids: Deployment of Chinese battery storage technologies and AI-based smart grids.
* Green Transport: Electric buses, EV charging stations, and local assembly plants in partnership with Chinese companies.
* Energy Efficiency & Industrial Upgradation: Energy-efficient technologies for textile, steel, and manufacturing sectors, plus green industrial parks under CPEC.

## Where to Start?

* Pilot Solar Parks: Launch joint projects in Southern Punjab and Sindh.
* Micro-Grids in Villages: Deploy off-grid solar and micro-hydel with Chinese assistance in rural areas.
* Smart Transmission Lines: Modernize transmission networks linking renewable hubs to national grid.
* EV Corridors: Establish Karachi–Lahore EV highway pilot project with charging stations.

## Focused Areas for Collaboration

* Technology Transfer: Local manufacturing of solar panels, turbines, and batteries.
* Joint Research: Establish Pakistan–China Green Energy Innovation Centers.
* Capacity Building: Training programs for Pakistani engineers in Chinese institutions.
* Green Financing: Launch joint energy funds and carbon credit trading mechanisms.

## Role of PPRII

The Perspective Policy Research Institute Islamabad (PPRII) envisions itself as a policy bridge and intellectual partner in the Pakistan–China Green Energy Partnership. PPRII will:
- Provide Evidence-Based Policy Research: Assess feasibility, policy gaps, and models for renewable integration.
- Facilitate Dialogue: Host Pakistan–China Energy Forums and expert exchanges.
- Promote Collaboration: Connect government, academia, and private sectors of both countries.
- Monitor and Recommend: Track CPEC Green Corridor initiatives and provide feedback for sustainable outcomes.

## Conclusion

Pakistan and China stand at the threshold of a transformative opportunity. By joining hands in the energy domain, both nations can move beyond transactional projects toward a strategic partnership for sustainability. Energy transformation through Chinese cooperation will not only stabilize Pakistan’s economy but also serve as a flagship model of South–South cooperation under CPEC.

PPRII is committed to working with Chinese partners to turn this vision into reality—a resilient Pakistan powered by clean energy, and a stronger China as the leader of global green transformation.

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