



CLEAN ENERGY INVESTMENTS AND FINANCING:

Why Pakistan's Initiatives Do Not Become an Investment Pipeline

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There are numerous clean energy policies and statements in Pakistan. They include renewables targets, concessional lending facilities, Islamic financing, aid mechanisms, Green Sukuk, and Green Taxonomy. Negotiations are ongoing on further grid investments. However, when a serious investor asks what projects will get financial close in the coming year, it becomes quite difficult to give an honest response. The main challenge is the lack of reliable process from policy implementation to financial close.

Clean energy is often presented as a climate concern. For Pakistan, that is too narrow. It is also an energy security, fiscal, and industrial competitiveness issue. During July to March FY2026, Pakistan imported 13.88 million metric

tonnes of petroleum products worth US\$8.9 billion, while transport consumed 82.5 percent of domestic petroleum products. A credible transition must connect clean electricity with storage, efficient industry, public transport, and electric mobility. Financing generation alone will not reduce exposure to imported fuel.

The central problem is not a shortage of sunlight, technology, or investor interest. It is the absence of a financing system that converts clean energy opportunities into bankable, grid ready, locally financed assets.

THE GLOBAL FINANCING RACE HAS A CAPITAL DIVIDE

The International Energy Agency expects global energy investment to reach US\$3.4 trillion in 2026, including US\$2.2 trillion for clean technologies. Emerging and developing economies outside China receive less than 15 percent of clean energy investment, although they account for 65 percent of the world's population. Their cost of capital for utility scale solar can be more than twice the level in advanced economies. This gap is no longer mainly about technology. IRENA reports that more than 90 percent of renewable capacity added in 2025 generated electricity more cheaply than the lowest cost new fossil alternative. The real contest is over contracts, currency risk, regulation, and institutional credibility.

PAKISTAN HAS ATTRACTED CAPITAL BEFORE

The total installed capacity stood at 49,651 MW by March 2026 in Pakistan. Renewable energy comprised 10,101 MW including 7,319 MW from net metering, but still only 4.5 percent of generation was from renewables. The Pakistan Economic Survey 2025–26 reveals that “PPIB managed to bring in 102 IPPs to be commissioned with a total capacity of 25,874 MW and an investment of more than US\$35 billion.” Out of these, 90 were in operation having a capacity of 20,769 MW and an investment of US\$28.7 billion. This model is a very expensive one and must not be repeated. Nonetheless, it proves that capital works when there are clearances, bankable deals, and a supportive state.

INITIATIVES THAT DID NOT BECOME A MARKET

The State Bank of Pakistan introduced the renewable energy financing scheme back in 2009; however, it was later updated in 2016 due to the low level of use. Under the new scheme, there was financing for projects, individual systems, and

accredited dealers, with loan terms stretching to 12 years. By 2019, the interest rate for consumers had been set at 6 percent, along with the Islamic Financing Facility.

The design lowered borrowing costs, but was inadequate to solve issues of land tenure, grid connection, improve a weak buyer, or stabilize an uncertain stream of revenues. Banks continued to evaluate the sponsor, equipment, permits, tariff, and repayment capacity. Where there were any uncertainties in the above components, low-cost refinancing did not result in a loan being made. The lesson here is simple: a lower interest rate will not make a project bankable.

Competitive bidding and increased use of variable renewable energy sources were envisioned by the Alternative and Renewable Energy Policy of 2019. Despite these goals, however, little has been accomplished in this respect. There are problems with the procurement process due to a lack of a realistic timeline, there are delays in increasing transmission capacity, and existing contracts limit the capacity to add new capacity. Although the issuance of the first sovereign green sukuk bond, the Pakistan Green Taxonomy, and the sustainable financing framework are good starting points, they all share one evaluation problem. According to the May 2026 report of the Finance Division, out of the total PKR 32 billion Sukuk bonds, only PKR 11.256 billion, about 35 percent, have been utilized, while the remaining PKR 20.744 billion has remained unallocated.

WHAT THE RECORD SAYS

The Sindh Solar Energy Project is an example of a concept that was well-received but failed during its execution. This project was approved in 2018, with the World Bank committing \$100 million towards it. It was meant to facilitate solar parks, public sector buildings, and 200,000 households. The completion report in 2026 showed the project's results as somewhat unsatisfactory and monitored and evaluated as moderate. Problems related to procurement delays, delayed release of funds, coronavirus pandemic, flooding, and lack of metrics of mobilizing private investment made the project design ineffective. Despite producing

valuable goods, public delivery substituted some market-building goals of the project.

The US\$325 million Access to Clean Energy Investment Program (ACEI) of the Asian Development Bank showed relatively good performance. It assisted in setting up solar systems on the roofs of 10,700 schools in Punjab and 2,000 schools in Khyber Pakhtunkhwa, reaching over 1.4 million children. Yet, one of the loans expected to be concluded in December 2021 was finally signed on 13 May 2025. The program proves that publicly owned clean energy infrastructure could be installed, but shows problems in terms of procurement speed and institutional capacity. Thus, further development of the school solar energy would require another publicly run project or development loan.

Grid Stability Enhancement Project that was recently approved through the BEST PAK program of the World Bank is an attempt at addressing one of the most important barriers within the energy system. The project that is estimated to cost US\$375.9 million hopes to improve transmission, accommodate 640 MW of curtailed wind power, and facilitate 491 MW of planned private renewable capacity. As promising as the project may look in terms of providing funds for necessary transmission infrastructure, its real success will rely on the pace of procurement process, reforming of transmission sector, and resulting private investment.

WHY PROJECTS STALL

The pattern is clear. Policies state the objectives without setting the transaction calendar that accompanies them. The credit initiatives lower the interest rate before the project is ready. Aid programs fund the assets without creating a replicable financing mechanism within the country. The green policy sets out the acceptable actions without having verifiable projects. There is diffusion of responsibility between different ministries, provinces, regulatory authorities, grids, distributors, and the financiers. Nobody is responsible for taking the project from idea to financial closure. Currency and maturity problems compound the problem. The equipment is priced

in dollars, the income in rupees, and the banks finance the assets through short-term deposits.

LESSONS FROM MARKETS THAT DELIVERED

Affordable finance is usually built before bids are invited. In India's Rewa Solar Park, the factors of land preparation, access to transmission, standard contracts, competitive bidding, payment assurance, and rupee financing were all included in the development. South Africa, on the other hand, used a procurement function, standard documentation, and bid rounds. In both countries, government assistance focused on risks that the investors could not control. Pakistan needs the same amount of discipline. Project preparation, common infrastructure, and proper risk support need to be financed by the public.

A FINANCING ARCHITECTURE BUILT AROUND DELIVERY

It is essential for Pakistan to release Clean Energy Investment Prospectus at an interval of every six months. The document will be prepared by the Ministry of Finance, the Power Division, and the Private Power and Infrastructure Board (PPIB), and it must only include those projects which have been proven to meet the criteria of land, permits, demand, grid, safeguards, procurement, and financing. An enduring support facility will fund the feasibility studies, financial modeling, safeguarding process, and transaction advisors. Every project should have a public data room along with the pathway to financial closing.

Different types of assets have different requirements for financing mechanisms. Utility-scale solar and wind power plants need auctions and project financing facilities. Investments in transmission and storage systems need revenue-based financing mechanisms and infrastructure sukuk. The use of energy service contracts and sustainability loans will enable efficiency improvements within industry. Solar irrigation, electric fleet vehicles, and smaller capital equipment need such financial products as leasing,

vendor financing, microfinance, and portfolio guarantee schemes. The Islamic banking institutions will make use of ijara and diminishing Musharakah models to finance equipment. Clean finance must be the driving force behind the adoption of efficient boiler technology, waste heat recovery systems, energy auditing, and reliable renewable supply chains in export oriented industries.

Risk reduction must be at the center of this framework. The concept of competitive bidding must be made a norm for utility-scale projects. Escrow accounts, partial risk mitigation, and stringent contract enforcement will certainly cut costs but not make up for the need for reforms within the distribution companies themselves. The weakness of the buyer makes any project risky right from the start. Public acceptance must also be made through competitive bids. The eligible projects can make bids for the least possible security, currency hedging, and first loss cover to get financed.

This program by the State Bank could be revived through Renewable Energy Finance 2.0 which will include refinancing in rupees for renewable energy, energy storage systems, energy-efficient machinery, solar water pumping, and electrical transport. The financial sector needs to continue to show

discipline in credit risks. Longer maturity periods must be linked to proper equipment, standardized contracts, energy audits, and energy savings. Development partners could provide limited portfolio guarantee or currency risk-sharing until performance improves at home.

Issuance of Green Sukuk must be based on an annual schedule for transmission, storage, public transport, and energy efficiency assets. Reports on allocation and impact should state financing charges, time lags, private capital raised, energy efficiencies achieved, and foreign currency risk. Each publicly sponsored project must have a date of review and a closing provision. Programs which continue to fail readiness and disbursement tests should either be revised or ended, but not extended unjustifiably.

Pakistani government has run enough pilot programs to get to the essence of the matter. The next step forward will not come from another paper but when the ready projects enter the market on time, risk assessment is transparent, financing is available in rupees, and results are communicated after money spent. The clean energy becomes a strategy for investment through institutions' funding of its implementation.

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