**Energy Transition**

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The Energy Transition Mechanism (ETM) is a collaborative initiative by Asian Development Bank (ADB) that aims to accelerate the transition from fossil fuels to clean energy in developing countries. The program seeks to retire coal power assets on an earlier schedule than if they remained with their current owners by using a market-based approach to fund country-specific ETM funds through public and private investments and financing from multilateral institutions. This would help financially constrained developing countries reach more ambitious emissions targets and also increase the demand for clean energy, ultimately lowering overall energy costs in the long run.

According to the Asian Development Bank (ADB), more than half of global greenhouse gas emissions come from the Asia-Pacific region, with coal-fired power plants responsible for a quarter of annual emissions in the area. The power sector in Pakistan heavily relies on thermal energy, which accounts for almost 61% of electricity generation, as reported in the Economic Survey of Pakistan (2021-2022). Additionally, in the financial year 2021-2022, the power sector consumed 9.8 million metric tons of coal, the highest among all sectors, representing 44.5% of total coal consumption. Consequently, Pakistan is facing significant challenges in transitioning to cleaner and more sustainable energy sources.

The Power Purchase and Infrastructure Board (PPIB) reports that coal currently accounts for approximately 12.8% of Pakistan’s installed capacity, with 1,320 MW generated from Thar coal reserves and 3,960 MW from imported coal. However, this trend is expected to shift as new units based on the Thar field are added to the electricity generation mix. It will be essential for Pakistan to balance its dependence on coal with alternative and renewable sources as the country strives to achieve an energy mix that is both sustainable and affordable.

Due to financial constraints in terms of capital and sunk cost, Pakistan cannot afford the luxury of imported renewable energy technologies.

The Asian Development Bank (ADB) provided a $0.3 million grant to aid Pakistan’s renewable energy transition. The grant will fund a pre-feasibility study of assets, including coal-fired, diesel, and furnace oil-based power plants, that could potentially be retired through the Energy Transition Mechanism (ETM) in Pakistan. ETM offers a range of benefits for Pakistan, including reducing power sector emissions, lowering energy costs, and managing the country’s Circular Debt. By retiring coal-fired power plants, clean energy demand is expected to increase by 2-3 times, leading to a reduction in overall energy generation costs over time. Additionally, ETM has the potential to attract investment in cost-effective renewable generation, smart grids, hydrogen, electric vehicles, and other clean technologies. The scalability of the ETM program also means that it can open new corridors for growth, development, and industrialization. This can create opportunities for new industries and job creation in the renewable energy sector, as well as opportunities for innovative financing mechanisms and business models.

Despite the potential benefits of the ETM program, there are several challenges and pitfalls on the way to implementing ETM in Pakistan, such as the lack of infrastructure for renewable energy sources, regulatory issues, and resistance from stakeholders in the coal industry. Additionally, concerns around the economic implications of transitioning away from coal and the potential impact on jobs and livelihoods need to be addressed.

Pakistan’s installed thermal capacity is heavily reliant on fossil fuels, with the oldest coal-fired power plant only five years old. The average age of the installed thermal capacity is over 20 years, which presents challenges for the ETM to retire these assets as they are still paying off their debt. The government has introduced policies such as the “National Power Policy 2013” and “Alternative and Renewable Energy Policy 2019” to encourage the development of an efficient and sustainable power generation, transmission, and distribution system that can meet the needs of the people and boost the economy. However, due to the financial constraints in terms of capital and sunk cost, currently, Pakistan cannot afford the luxury of imported renewable energy technologies.

To address these challenges, Pakistan needs to establish comprehensive policies and incentives that facilitate the transition to cleaner energy sources while ensuring a fair and equitable shift for workers and communities impacted by the shift away from coal. This could involve implementing training and education programs for coal industry workers to transition to new jobs in the renewable energy sector. There is also a pressing need to increase investment in renewable energy infrastructure, especially in underserved rural areas. This will require the government to attract private sector investment and provide appropriate support to encourage investment in renewable energy. Additionally, more transparent and open selection criteria for coal power plants, with increased stakeholder participation, can ensure that any remaining coal power plants are the most efficient and environmentally friendly options available.

The involvement of multilateral development banks, such as the Asian Development Bank, can also play a critical role in supporting Pakistan’s transition towards cleaner energy. Through providing technical assistance, financing, and knowledge sharing, these institutions can help Pakistan build the necessary infrastructure and capacity to effectively implement ETM and achieve its climate and energy goals.

In a nutshell, Pakistan’s transition towards cleaner and more sustainable energy sources will require a concerted and coordinated effort from all stakeholders, including the government, the private sector, civil society, and local communities. The Energy Transition Mechanism offers a promising framework for this transition, but it will require comprehensive policies, innovative financing mechanisms, effective communication strategies, and the support of multilateral development institutions to overcome the challenges and ensure a just and sustainable transition for all.

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