What Power Exchanges can do for **cross-border trading in Nepal?**

Over the past two decades, cross-border electricity trading between Nepal and India has been dependent on the execution of long-term Power Purchase Agreements (PPAs). These PPAs are signed as a part of special Memorandums of Understandings (MoUs) and are supported by the governments of both the countries. While the geopolitical negotiations and treaties till date have established initial trade, the full trading potential, efficiency, and growth of cross-border trading remains largely untapped.

In March 2021, the Government of India allowed the Power Exchanges to expand the power markets beyond the Indian boundary for building a South Asian Regional Power market. The first Power Exchange-based cross-border trade took place in April 2021. Since then, around 1-2MUs are being traded daily. Many credible agencies have projected the cross-border trading potential in South Asian countries to reach 100BUs by 2030.

It is well known that continuity and growth of markets can be sustained only with positive-sum transactions that leave both sides, i.e., the buyer and the seller, with better payoffs. Cross-border trade is no exception to this rule. There are some necessary conditions

The success of Power Exchanges rests, more than anything, on its acceptance by the participants as a fair, efficient, liquid and a largely equitable marketplace. This is where the role of political and regulatory bodies becomes important in defining the role of exchanges, their ownership, management, and governance structure, and in providing the necessary market oversight and scrutiny.

In India, for the last 13-14 years, the market participants – namely the discoms, gencos, IPPs, renewable energy players and large commercial and industrial consumers – have leaned on exchanges to meet their present and future needs of portfolio optimisation and management. Power Exchanges have traded more than 500BUs of electricity since inception – roughly 100 times the amount of electricity consumed in Nepal in 2018. Over this period, the exchange-based markets in India were crucial in redressing and streamlining some of the distortions which existed in bilateral trades, transmission congestion, imbalance settlement mechanism and resource inequality amongst states. Moreover, during this period, the exchanges have not seen a single payment delay or default among the millions of transactions on these platforms.

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CERC and SEBI, regarding the jurisdiction of these contracts was resolved. This will now enable the commodity exchanges such as NCDEX/NSE, MCX, and others to introduce futures and options in conventional, green, and certificate-based products. Well-functioning and liquid financial markets will for such balanced transactions, including unbiased access to the markets; a fair, neutral, and equitable price discovery mechanism for all the market participants; and, above all, a payment security and settlement mechanism for trade. The key question then is how much or how little the Power Exchanges are fundamental to these conditions.

Power Exchanges are hosts to markets and play an important role in market development. The core function of exchanges is to ensure fair and transparent transactions by providing liquidity, removing information asymmetries, reducing transaction costs, and increasing price transparency. Trading through Power Exchanges has many advantages over other trading mechanisms such as 24/7 operation, standardisation of contracts, efficient price discovery using algorithms, and counterparty risk management.

But a key feature of the Indian Power Exchanges has been the narrow band in which they have operated. The exchange market share has stagnated at about 3-4% of the total volumes. This is because the transactions on exchanges have existed in a near-vacuum, without a parallel hedging market to manage the price risks. In the absence of financial derivative contracts, which are essential for risk mitigation, the price risks are borne by the market participants. The generators thus face difficulty in providing comfort to lenders for financing merchant power plants, while discoms also limit their exposure to exchange for portfolio optimisation.

The answer to these problems lies in having more markets instead of less. In October 2021, the gates were also opened for the introduction of Electricity Futures and Derivatives Contract. The long-standing dispute between the electricity and financial regulators, i.e., functioning and liquid financial markets will allow buyers and sellers to effectively hedge their price risks on Power Exchanges.

In recent times, there is also a huge concern around the nature of electricity (whether it is green or brown) on account of the imperatives to limit global warming. This distinction has led to the emergence of Green Markets and related products on Power Exchanges. It has also broadened the participation on Exchanges and opened new avenues for trading. Indian Exchanges have started operating in new segments with Green Term Ahead (GTAM) and Green Day Ahead (GDAM) contracts in solar and wind energy. In the near future, new contracts are expected in hydro, which will value the green component of the hydro power, and also in ancillary services for grid security and balance. In this emerging order, market segmentation and product differentiation have become essential for valuing the various attributes of electricity.

All the above are significant developments with the potential to change the landscape of the power markets in South Asian countries. The exchange-driven allocation (product, volume, and price) mechanism, even with its shortcomings, is the best choice amongst the other available alternatives for large, complex, and interconnected geographical and political dispensation. Product differentiation in exchanges can offer value stacking or multiple revenue streams that the different technologies offer today, viz., green attributes, storage capability, faster response and flexibility, locational advantages, resource inequality, and more.

It is important that markets be allowed to function seamlessly without any regulatory or political interventions. The deepening of markets with the introduction of much-awaited financial markets and renewable-energy-related products will increase confidence amongst participants, pave the way for new investments and create greater opportunities for Nepal. Undue influence, on the other hand, could result in shallow markets and send out wrong signals, thereby eroding the credibility of markets and Power Exchanges.

Historically, markets have achieved far more than diplomacy or bureaucracy ever have. It is important that governments allow market forces to shape the next order instead of engaging themselves in time-consuming contract negotiations that have costs and frictions. India has established strong foundations for regulatory and institutional reforms of power markets. The next steps in market reforms are already underway. Meanwhile, Nepal needs cross-border transactions for economic growth, and market-based growth would be the right way forward.

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