

What are the barriers to establishing a wholesale energy market in Pakistan?

The energy sector needs to be made more efficient and electricity more affordable for businesses to build competition in Pakistan's exports. Recently in 2020, the National Power Regulatory Authority (NEPRA) has designed and approved the Competitive Trading Bilateral Contract Market (CTBCM) model. However, implementation has stalled. Energy and industry sector stakeholders in Pakistan question the viability of CTBCM given the known issues on the national grid and fail to see a clear path to achieving the supposed benefits of a wholesale market.

Policy challenge

Despite policy interest in reform, the energy sector in Pakistan operates inefficiently, resulting in operational losses (transmission and distribution) of between 23-35% and one of the highest electricity tariff rates in the region. Pakistan's maximum tariff is 40% higher than the Indian average, and 16-29% higher than the corresponding average, restricting access to reliable energy for households and businesses. The impact of lack of reliable electricity access on households and firms imposes a massive cost on the economy, estimated at **\$12.9 billion (4.8% of GDP) annually**. Government-run Central Power Purchasing Authority (CPPA) – the only official power purchaser in Pakistan – purchases electricity from all the power producers and then NEPRA sets up a single nationwide tariff for all consumers, but allows for cross subsidies to exist in the system. For instance, better performing power distribution companies with little losses end up charging higher tariffs to their consumers to compensate for losses incurred by poorly performing distribution companies. Similarly, industries are made to pay higher tariffs due to distributional losses faced in residential areas.

Data

A portion of this investigation will have to be a theoretical study as the wholesale markets don't yet exist. Focus groups and interviews of various stakeholders in the energy sector can provide insights.

- **Publicly available power purchase agreements.** The empirical part of the study can involve comparing the bilaterally contracted Power Agreements in the past with the newly contracted power purchasing agreements under Indicative Generation Capacity Expansion Plan 2022-31 (A plan that outlines competitive bidding processes and the gradual shift in energy mix from fossil fuels towards renewables). This provides information on how the tariffs differ as a result of competitive contracting in the wholesale markets. The Power Purchase Agreements with Power producers are available on the NEPRA website but will have to be compiled into data form.
- To study cross subsidies in the energy sector, consumption, and distribution losses data from the DISCOs at the feeder level can be utilised. This data is not available publicly and will require access permission from the federal government. Finding the actual value of the cross subsidies and the distortions in the system will help us look at the value contribution of setting up a wholesale energy market.

Stakeholders

- Ministry of Energy (Power Division)
- Ministry of Commerce and Industries
- NEPRA (National Electric Power Regulatory Authority)
- CPPA (Central Power Purchasing Agency)
- PPIB (Private Power and Infrastructure board)
- 11 Distribution Companies in Pakistan (DISCOS)
- Provincial Governments
- All Pakistan Textile Mills Association and Chambers of Commerce

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