ENERGY POLICY DIRECTIONS: SEEKING THE RIGHT PATH

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Preamble

Energy fuels economic growth! But for Pakistan's energy sector, it's a constant struggle. There has been a gradual buildup of chaotic situations over decades—one crisis after another, but the sector has failed to learn. The energy sector in Pakistan exemplifies a broader fallacy—a sector struggling with challenges beyond mere implementation hurdles. This underscores the longstanding and pervasive nature of the problem at hand.

Continuation of inconsistent and vague policies, short-term fixes without vision, an outdated governance model influenced by vested interests, and unprofessional management—all these and more have plagued the sector. There is no simple strategy or easy solution to this menace. Acknowledging and addressing the unique façades of the energy problem is central to meaningful progress.

Policymakers believe they know everything. They seek policy guidance only from donors or foreign consultants. Their assertions, or perhaps misconceptions, elude the intellectual rigor necessary to comprehend the intricate nature of this longstanding and profound mess, which poses real and substantial threats to the sector's and country's development.

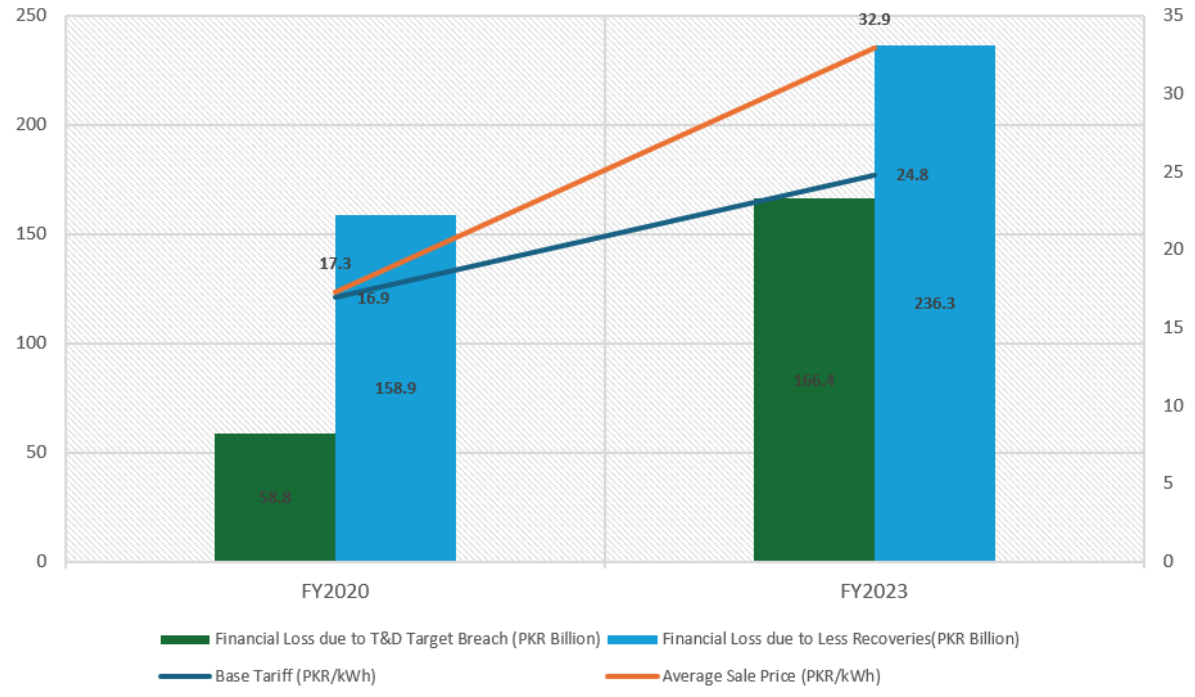
Navigating Challenges in the Energy Sector

The financial strength of the energy[28] sector is crucial to ensure that it operates smoothly and effectively. In Pakistan's electricity supply chain, unsustainable financial management, rather than inadequate financial resources, has caused a persistent deficit between incoming and outgoing cash flows - circular debt.

Circular debt grew from PKR 0.1 trillion in FY2006 to PKR 2.63 trillion as of January 2024, causing enormous damage to not just the sector but the whole economy. It is estimated that a 10 percent growth in circular debt causes a total public welfare loss of US$13 billion[29] .

Unfortunately, the term circular debt has led policymakers to believe that it is simply an accounting matter. To balance the accounts, they have been using the tool of electricity tariffs. It has not been realized that increase in tariff further increases the circular debt. PIDE Immediate Reform Agenda: IMF and Beyond (2024) rightly defines this as Circularity—tariff increases circular debt; in turn, circular debt leads to tariff increase.

Figure 1. Tariff Increase and Increase in Financial Losses



Source: NEPRA Reports

[28]This write-up focusses only on the electricity sector.
[29]Malik and Mustafa (2024).

In FY2023, with the increase in tariffs, the financial gap was recorded at nearly PKR 403 billion only because of lower bill collections and unaccounted transmission and distribution losses.

The oversimplified strategy of solely increasing tariffs fails to consider the multifaceted nature of the sector mess, necessitating a meticulous unraveling of intricate complexities and contemplation from diverse perspectives. Beyond that, it's imperative to recognize that resolving the decades-old imbroglio through quick fixes will only lead to more troubles. Unfortunately, in the last two decades, governments have merely scratched the surface in addressing sector issues[30] .

To attract media attention, every other year, they shift blame to consumers or point to electricity theft as the primary cause of financial losses. This overlooks the deficiencies in management, incompetency, and bad decisions of decades. Electricity theft may be an issue, but not the sole factor contributing to financial troubles. Theft occurs only with the involvement of administrative staff[31]. To make matters worse, the administration often overcharges compliant consumers to compensate for theft, low collections, and other leakages due to technical constraints.

The world is rapidly adopting smart technologies for theft control, demand management, billing precision, and grid reliability[32] . However, in Pakistan, we persist in using ineffective tactics such as conducting raids on consumer premises with the police in front of the media. These methods have never worked and will not work. However, the generalist(s) who occupy the executive seat do not understand and are unwilling to learn. The main concern that needs to be addressed is this generalist's unnecessary centralized control and unprofessional approach.

Undoubtedly, losing power or control (of several years) is a tough call, especially when loads of freebies accompany this power. The reasons behind recurring debt have been intentionally disregarded or overlooked. As mentioned earlier, policymakers (legislators and bureaucracy) are more inclined towards the donors' advisory, possibly for personal gains. Even reform models or market models are developed and evaluated by foreign consultants. It would not be wrong to say that half of Pakistan's energy sector problems are due to donor-driven policy agendas. For instance, unaware of the actual ground conditions, donor agencies (including the IMF) push for tariff increases to reduce sector deficits (circular debt).

The political and socio-economic influences of the government and bureaucracy (decision-makers) frequently detract from the business-oriented approach of state-owned companies. Decisions such as appointing managerial staff are influenced by political factors rather than merit, compromising performance and accountability. Serving on the board of an energy company is unquestionably a powerful opportunity financially and to shape its decisions. Effectively, all administrative and financial decision-making is carried out at the Ministry level by individuals who may lack in-depth knowledge about the sector.

[30]Malik (2020).
[31]PIDE (2024). The Immediate Reform Agenda for Pakistan, Seminar as part of PIDE ISLAH Series, Serena Hotel, Islamabad, April 01.
[32]Malik, A., Asad, T., and Mustafa, G. (2024). The Efficiency of Electricity Billing System in Pakistan. RASTA DDR Study Showcase at 4th PIDE-RASTA Conference, Roomy Signature Hotel, Islamabad, September 03-04.

Realizing this challenge, PIDE's work[33] consistently advocates decentralized financial and administrative decision-making at the energy company level. Additionally, the PIDE Immediate Reform Agenda recommended that DISCO's Chief Executive Officers (CEOs) be appointed Principal Accounting Officers instead of the Secretary in the Power Division.

Government Calls All the Shots: No Plan, No Market!

In Pakistan, the energy sector is not driven by market forces but by government decisions regarding future projects, energy pricing, long-term planning, policy design, or any other decision. Unfortunately, there has been a failure to develop an integrated energy plan.

So many polices announced, but none can be categorized as overarching with clear targets. Due to the lack of market, long-term planning, inefficient processes, and poor decisions by government-owned entities, 44% of electricity generation comes from thermal sources. Despite adding local coal and renewables in the generation mix, the reliance on imported fuels is still enormous (above 25%).

The authorities have significantly damaged the power sector by approving and supporting investments in unsuitable projects or jeopardizing crucial projects for personal gain or due to their incompetence. The power sector has consistently been under scrutiny for corruption in financial matters, whether it is related to the establishment of Independent Power Plants (IPPs) as per different policies, rental power plants (RPPs), Re-gasified Liquefied Natural Gas (RLNG) power plants, or coal projects under CPEC[34] .

Several policies were announced over the years (starting in 1987), followed by the new additions in capacity under IPP mode. Missing was the research and debate at the national level behind each policy. Every policy was designed to address the needs of specific interest groups[35] . The result is, as in 2024, IPPs and capacity payments are in the headlines every second day. The reason behind this failure is that the market forces were not allowed to operate and decide the future capacity, plant or fuel type, and mode. The similar mistakes were repeated each time.

An example worth quoting here is of coal power plants, including those based on imported coal and Thar coal. These plants were commissioned without considering future import dependency, capacity payment burden, plant efficiency, location and allied transport costs, and environmental costs. These projects were initiated when the world was planning to transition away from generators that emit greenhouse gases.

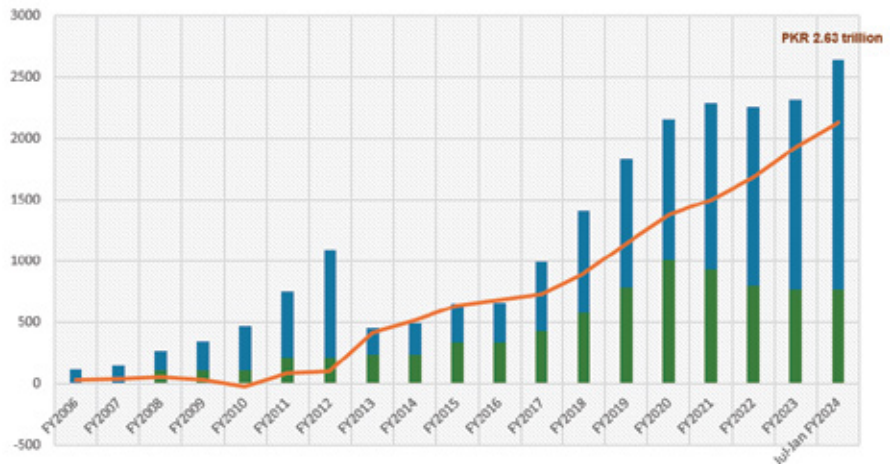
Likewise, as Pakistan's domestic gas production declined, a crucial opportunity emerged to transition towards sustainable and more affordable renewable energy sources. Unfortunately, the decision to commission RLNG plants closed that door and intensified the strain on energy imports, resulting in the addition of costly electricity to the system.

[33]Malik (2020), PIDE (2021), Cheema et al. (2022), and PIDE (2024).
[34]Cheema et al. (2022).
[35]Malik (2021).

We do have an independent regulator formed through an Act, but without effective power and is incapable of regulatory oversight. Government is influencing all regulatory decisions. Competent professionals are not being considered for critical positions.

The power sector lacks coordination across its three main branches: generation, transmission, and distribution. The vague job description for a secretary (in the Power Division, Ministry of Energy) and shallow discussions on losses and recovery in the Ministry, stemming from a lack of technical expertise, have yet to make progress in reducing losses or improving recovery. Receivables are on the rise, and the deficit (circular debt) is continuously growing [36] .

Figure 2. Power Sector Deficit - Circular Debt



Source: PIDE Compilation

The reform process, initiated in the late 1990s, has stagnated. Energy companies have been corporatized after unbundling, yet it is unclear which law governs them, causing confusion and hindering progress. Instead of decreasing, the government has assumed a more prominent role in the power sector.

Rather than prioritizing the maintenance and efficient utilization of existing capacity, the emphasis has remained on new projects, resulting in the incorporation of expensive yet excessive capacity in the system. Inadequate investments in downstream transmission and distribution infrastructure have significantly worsened these issues. Damaged networks, theft, and inadequate energy accounting result in over 25% of electricity lost[37] .

The National Transmission and Dispatch Company (NTDC), despite its status as an independent organization, lacks initiative and a proactive approach. The bureaucratic attitude has hindered its ability to expand the national grid to connect remote areas in Sindh, Baluchistan, and KPK regions. Furthermore, NTDC's failure to upgrade its transmission infrastructure to the desired level is a serious concern[38] .

[36]Cheema et al. (2022).
[37]Ibid.
[38]Malik, et al. (2024).

Despite having surplus capacity, the application of the load suppression model raises questions. Cross subsidies across sectors have led to a loss of competitiveness for the industry in the global market. The current uniform tariff policy does not serve as an incentive for private or state-owned utilities, leading to increased inefficiencies.

The competitive Trading Bilateral Contract Market (CTBCM) model has been developed. However, its implementation hinges on the crucial task of establishing a justifiable wheeling cost. Despite being inactive for four to five months of the year, over half of the currently installed capacity still incurs capacity charges.

Introducing CTBCM will increase capacity utilization and significantly reduce the burden of capacity payments for domestic consumers while offering a promising future for the industry. However, when the wheeling charge tries to cover all ancillary deficits, including the costs of excessive employment, it will not be acceptable or viable for market participants. It is difficult for those in charge to comprehend this straightforward phenomenon.

How can the fundamental challenges plaguing the power sector be addressed? The answer is:

Professionals Fix, and The Market Decides!

A solution often suggested for all the problems in the energy sector is the privatization of monopolies without realizing the associated challenges and answering solutions to those challenges. Even the privatization model has not been debated as a viable option. It is important to note that making and implementing privatization contracts requires expertise. Does this exist within the relevant quarters? What is the likelihood of making wrong decisions, as has happened in the past? How can the risks of privatizing a loss-making entity's assets be mitigated without addressing the entity's liabilities? What is the likelihood of success considering the unfavorable legal, regulatory, political, and institutional conditions?

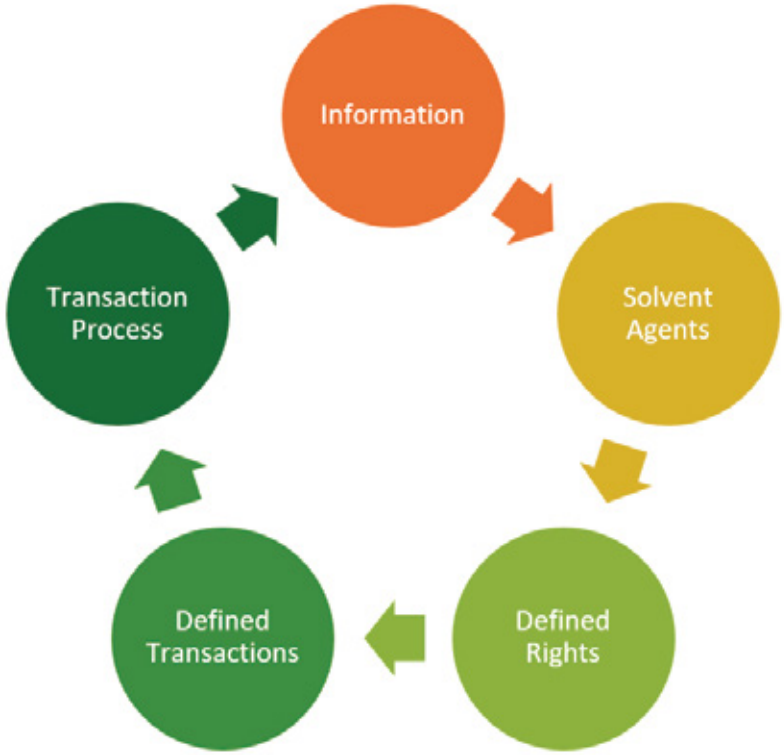
The challenge lay not in the destination but in the absence of a coherent roadmap necessary to reach it, resulting in disjointed planning (and activities) among distinct departments. This fragmented approach in the power sector warrants fundamental transformation. The existing financial and environmental costs underscore the need for deep reform. Even in the case of privatization, the best option could be the gradual involvement of the private sector through listing in the stock market, not by selling the entity's assets.

The energy sector desperately needs sector specialists who comprehend its intricate dynamics and possess the capability to rectify the mistakes of the past two decades. The time for trial and error is long gone. A comprehensive policy and a long-term plan are urgently needed. The absence of a well-informed, long-term vision and strategy has already caused substantial costs.

A comprehensive and coordinated approach to power sector planning is not just important; it's essential. This approach must involve accurately forecasted demand, upgrading and expanding transmission and distribution infrastructure, improving efficiency, technology adoption, reducing costs, and ensuring sustainability. Policymakers and planners need to understand energy systems' complex economic, political, and environmental interconnections and uncertainties. It is only possible when they are sector specialists.

Coordination should extend beyond the energy sector and involve meaningful consultation with other sectors. Successful implementation depends on the active involvement of local stakeholders (with their well-researched input) rather than solely relying on donor agencies.

The most crucial approach to address the challenges in the energy sector is to focus on developing a robust and competitive market. Over the last five years, PIDE's research has advocated developing an energy market. As explained in Figure 1, the energy market is where potential parties have the information; these are solvents, their rights are defined, and the transaction process is clearly spelled out. In simple words, the rules of the game are clearly defined.



Source: PIDE (2021)

Pakistan, an economy worth US$375 billion with a population of over 250 million, relies on imports for 49% of its primary energy supplies[39] . This strains its limited foreign exchange reserves of US$14.7 billion (as of August 29, 2024). From a geo-economic perspective, heavy energy imports and global market volatility constantly threaten Pakistan's economic and energy security.

Resolving Pakistan's energy crisis necessitates a well-considered, interconnected approach that dispels misconceptions and fosters cooperation and discussion to devise sustainable solutions that benefit all.

[39]49% includes overall energy imports.

The energy sector in Pakistan mirrors the nation's broader societal and economic challenges. A lack of academic engagement has led to inadequate, erratic, and flawed energy policies, allowing foreign consultants and donors to address Pakistan's complex energy sector ineffectively. This has significant implications for its socio-economic progress, underscoring the pressing need for reform informed by local insights.

Feeling the gap, PIDE introduced the culture of debate in 2020—several back-to-back webinars and roundtable consultations covering each domain in the energy sector. The vision was to foster collaboration, leverage a wide array of expertise, and thoroughly analyze potential solutions. By considering different perspectives, it becomes easier to understand the strengths and weaknesses of proposals and shape societal acceptance over time. Power Sector: An Enigma with No Easy Solution—comprehensive research compiled (based on sector specialists' input) as a book is an outcome of one of PIDE's initiatives.

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