



Analysis of the Role of Governance and Institutional Issues in Energy Crises in Pakistan

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ABSTRACT

The persistent energy crisis in Pakistan has emerged as a critical impediment to the country's economic growth, social development, and political stability. While multiple factors contribute to this crisis including rising demand, inefficient infrastructure, and dependency on imported fuels the role of governance and institutional shortcomings remains insufficiently explored in academic discourse. This research investigates how systemic governance failures and institutional inefficiencies have exacerbated energy shortages, discouraged investment, and impeded effective policy implementation in Pakistan. Through an extensive review of academic literature, policy documents, and empirical case studies, the study reveals that corruption, regulatory inconsistency, poor financial management, and lack of accountability have collectively undermined the effectiveness of energy sector reforms. Additionally, the politicization of energy projects, bureaucratic inertia, overlapping institutional mandates, and the absence of long-term strategic planning have further compounded the crisis. The paper emphasizes the critical need for transparent regulatory mechanisms, inter-agency coordination, and capacity building, and sustainable governance frameworks to overcome the crisis. It concludes that without urgent institutional reform and robust governance structures, Pakistan's energy insecurity will persist, thereby hampering its aspirations for inclusive economic growth and long-term stability.

Keywords: Energy Crisis, Governance, Institutional Failure, Pakistan, Energy Policy, Corruption, Regulatory Frameworks, Strategic Planning.

Introduction

Modern economies depend on energy to drive growth, development and ensure social well-being. Electricity runs industry, moves vehicles, helps with communication and supports people's daily routines. The dependability of energy sources today affects the competitiveness of the economy, the quality of people's lives and the nation's safety. Pakistan's progress and development plans rely on the importance of the energy sector. However, Pakistan has experienced a long-lasting energy crisis for over two decades marked by a permanent difference between what the country uses and produces, regular electricity shortages and lots of load shedding that interrupts activities in both industries and homes (Faheemullah Shaikh, 2015).

Pakistan continues to have major energy shortages which threaten the country's economic growth and stability. Energy consumption in the country has gone up fast because of an expanding population, new cities, more industry and the need for electricity. Still, because of supply-side difficulties, a lack of infrastructure and inefficiency, the sector has not been able to meet the needs it was meant to address. Because of the regular power outages, both the country's economy and its population have been harmed, with effects seen in schools, hospitals and public services. On top of this, Pakistan's need to import costly fuels such as oil and liquefied natural gas leaves it at risk from changes in the global market and problems with foreign exchange which makes handling energy more complicated (Salik, 2024).

Historically, the roots of Pakistan's energy crisis have often been explained through the lens of technical

inefficiencies, infrastructure limitations, and financial constraints. While these factors undeniably contribute to the problem, there is an increasingly recognized but insufficiently analyzed dimension that is equally, if not more, critical: governance and institutional weaknesses. Governance refers to the decision-making processes, policies, and frameworks that guide the sector, while institutions represent the formal and informal rules, organizational structures, and behavioral norms that regulate the sector's functioning. In the context of Pakistan's energy sector, weaknesses in governance and institutional capacity have manifested in inconsistent policies, lack of strategic vision, fragmented responsibilities among agencies, and inadequate regulatory oversight (Talat Anwar, 2023).

The weaknesses in governance and institutions have helped corruption grow, have limited transparency and encouraged decision making based on political influence rather than skill. Political meddling in energy projects can make it take longer to implement, raise expenses and reduce the quality. Besides, there are not enough effective ways to enforce rules, disagreements among authorities and poor accountability which all reduce the private sector's interest in investment. Many private investors find it difficult to take part in the sector because of red tape, unclear rules and the risks linked to unstable government (Seema Arif, 2023).

This paper aims to study how weak governance and faulty institutions contribute to the energy crisis in Pakistan. This paper shifts past traditional explanations that focus only on technical and financial factors and places the energy challenge in a larger context. It examines the reasons why corruption, poor transparency, political problems, lacking strong regulation, divided duties and insufficient resources keep the sector from improving. The aim of the analysis is to show why the energy crisis does not end, although resources are available and needed reforms exist.

Literature Review

National policy discussions and research studies in Pakistan have long focused on the energy crisis. A lot of research on the issue has centered on the difficulty of producing enough electricity, but a new trend shows that weak government and institutions play a major role in making the crisis worse. They suggest that correcting inefficiencies in energy systems won't fix the problem unless the rules guiding the sector are also improved (Shabana Naveed, 2022). A lack of unity among energy authorities leads to many inefficiencies in the sector. Confusion in how to make and put policies into effect often occurs because of the overlapping powers of federal and provincial governments. Because there is no strong coordination, it becomes tough to create united strategies which often leads to delays in building infrastructure. As a result, regulators can't ensure compliance or manage efficient cooperation among agencies (Muhammad Arslan, 2025).

Corruption and a failure to be accountable make things worse for the country. A lack of strong oversight allows for oddities in buying energy, setting tariffs and using resources inappropriately. If energy systems are not open and clear, the public loses trust and many investors shy away from the energy sector. The drop in investor confidence may result in problems for energy security and the industry's sustainability in the future (Seema Arif, 2023). Lack of adequate institutional abilities is a major problem in achieving energy reform. Often, regulatory bodies do not have the needed skill or freedom to carry out important reforms. As a result, lacking investment in collecting data and doing energy audits makes it hard to

make well-informed choices. Because there is a weak foundation for institutions, it becomes difficult to follow progress, measure impact or change strategies when new problems arise (Kafait Ullah, 2017).

Pakistan's energy sector is made more difficult to change because of its political economy. Often, selecting and carrying out projects is driven more by political concerns than by technical evaluation. This politicization distorts priority-setting processes and can result in the adoption of inefficient or unsustainable technologies. The cumulative effect of these issues suggests that without substantive improvements in governance and institutional design, Pakistan's energy crisis will remain intractable (Syed Rizwan Haider Bukhari, 2024).

Analysis

Governance Challenges

Corruption and Lack of Transparency:

The energy value chain in Pakistan is greatly affected by corruption which makes the sector less efficient and reliable. From the time contracts are first awarded to when tariffs are set and projects are implemented, greedy actions have systematically interfered with fair competition and responsibility. Investigations by Transparency International and local media have found that corruption and bias during procurement add extra costs and make projects take longer to finish. Such acts squander public funds, make investors less confident and raise the costs of producing energy for people. There have been many claims that IPPs have tried to charge more than they should, adjust contract terms and use policy gaps to earn unreasonable profits. Such a lack of transparency and accountability can damage both the results and schedule of a project as well as the effectiveness of regulations and trust in public institutions. Fighting corruption is very important for creating a fair and lasting energy sector in Pakistan (Seema Arif, 2023).

Policy Incoherence and Instability:

Pakistan's energy sector has struggled to develop steadily because there is no clear, dependable long-term energy policy in place. Fast and frequent shifts in policies brought about by changes in politics or government focus interrupt the steady work required for achieving results. The unpredictable nature of energy policies turns away potential foreign and local investors by making them worry about sudden rule changes and possible losses. In addition, important stakeholders, including industry specialists, consumers and those from the private sector, are rarely consulted during the policymaking process in Pakistan. This situation makes policies seem less acceptable and decreases the number of people who obey them. That's why a stable, inclusive and forward-looking energy policy framework is necessary to boost investor trust and help the sector move forward (Yongrong Xin, 2022).

Regulatory Weaknesses:

In Pakistan, organizations like the National Electric Power Regulatory Authority (NEPRA) and the Oil and Gas Regulatory Authority (OGRA) look after the country's energy sector. Such institutions are frequently considered not to be fully independent and lacking the knowledge to control the changing energy sector properly. When top positions in these agencies are given to people chosen by politicians, the agencies often become exposed to outside pressures. Furthermore, having fewer resources and fewer staff means energy regulators struggle to enforce rules, observe energy providers' actions and penalize those who do not pay. Consequently, rules are not well enforced which leads to continuing inefficiencies and mistakes. Increasing the independence and skills of these regulators along with their resources is necessary to improve the way the energy sector is managed (Shabana Naveed, 2022).

Institutional Fragmentation:

There are many actors in Pakistan's energy system and their roles often overlap and may sometimes go against each other. There is often little collaboration between the

Ministry of Energy, the Water and Power Development Authority (WAPDA), the National Electric Power Regulatory Authority (NEPRA), the Oil and Gas Regulatory Authority (OGRA) and the energy departments in each province. When organizations are not connected and work separately, their decisions are piecemeal, they do the same tasks again and resources aren't used effectively. Because there is not a unified framework to unite their actions and goals, implementation of energy reforms is less effective. Also, having numerous authorities' leads to misunderstandings among stakeholders, slows down project approvals and reduces accountability which stops the sector from progressing effectively (Muhammad Rehman, 2023).

Politicization of Energy Projects:

For many years, political meddling has greatly hindered the proper development and completion of energy projects in Pakistan. Often, political needs and quick results are why projects are started or made priorities, rather than considerations of technology or profitability. Such models typically end in outcomes that include overspending, project delays and limited efficiency in use. A remarkable case is the Nandipur power plant which was rebuilt over the objections of technical experts who said it would not work well and cost too much. By politicizing, the process reduces objectivity, squanders funds and damages trust among investors. As a result, it prevents Pakistan from forming a sustainable plan to handle its energy problems, adds to existing problems and makes the energy crisis worse (Nayyar Hussain Mirjat, 2017).

Institutional Shortcomings

Capacity Deficits:

Institutions responsible for managing Pakistan's energy sector are frequently plagued by significant capacity deficits that hinder their operational effectiveness. If energy agencies are underfunded continuously, they cannot update their infrastructure, modernize their systems or use the latest technologies in managing energy. Often, these institutions do not have staff who are trained enough to perform detailed energy audits, predict how much energy will be needed or handle large energy projects. When administrative systems are outdated and there are not enough good ways to manage data, it becomes more difficult for them to make wise choices or handle crises in advance. Also, since employees in the energy bureaucracy rarely have access to training and professional development, their skill shortages continue to grow. As a result, institutions cannot adapt easily, policies struggle to be applied and mismanagement and inefficiencies increase throughout the energy sector, making the crisis even worse. (M. Mujahid Rafique, 2017)

Weak Legal Framework:

Pakistan's energy sector is governed by an outdated and fragmented legal framework that fails to meet the demands of a rapidly evolving energy landscape. Many of the existing laws are either obsolete or lack the necessary provisions to regulate modern energy systems, such as renewable energy integration, decentralized generation, and energy efficiency standards. Legal ambiguities, overlapping jurisdictions, and inconsistent enforcement contribute to a climate of uncertainty that discourages investment and complicates project implementation. The absence of a unified, coherent legal structure undermines regulatory predictability and erodes investor confidence. Moreover, legislative reforms are frequently delayed due to bureaucratic inertia and political interference, and even when reforms are passed, enforcement mechanisms are often weak or completely ineffective. Strengthening legal frameworks is critical for institutional stability and long-term sectorial development (Nida Batool Sheikh, 2024).

Data Deficiencies:

Reliable and timely data is essential for effective energy planning, demand forecasting, and policy evaluation. Unfortunately, energy institutions in Pakistan often operate with outdated, fragmented, or non-digitized data

systems, significantly impairing their decision-making capabilities. The lack of standardized data collection practices results in inconsistencies that hinder accurate analysis and limit the ability to design evidence-based policies. In many cases, energy usage statistics, transmission losses, generation capacity, and consumer demand figures are either unavailable or unreliable. This data gap not only obstructs long-term planning but also affects real-time operational management. Furthermore, limited data transparency weakens accountability and prevents stakeholders particularly investors and development partners from making informed decisions. Modernizing data infrastructure is crucial to strengthening institutional efficiency and promoting informed governance in the energy sector (Abid Ullah, 2023).

Accountability Mechanisms:

Because there are few effective accountability systems in Pakistan's energy sector, inefficiencies, mismanagement and corruption are allowed to continue. Those responsible for carrying out energy projects or setting regulations in the field usually lack proper ways to assess their performance and progress. Therefore, poor results, delays and budget exceeding usually do not lead to consequences. Many parliamentary committees, regulatory agencies and public audit organizations are in short supply of resources, staff and the right skills and are easily controlled by politics which makes them less independent and useful. As a result of poor oversight, there is more risk of rent-seeking, hidden contracting and the use of public money without accountability. Establishing independent and empowered accountability structures is essential to improving governance and restoring credibility in the energy sector (Kafait Ullah, 2017).

Impact on Energy Crisis

Governance and institutional deficiencies directly contribute to Pakistan's energy crisis in several ways:

Inefficient Project Execution:

A major consequence of these problems in Pakistan's energy sector is that infrastructure projects do not get completed on time. There are often long delays in energy projects because of red tape, politics and corruption during the project's implementation. Inadequate assessments of project feasibility, hidden steps in buying and lack of monitoring cause costs to rise and results to be poor. When projects to build and move energy are delayed, there is an additional shortage of energy nationwide. When projects are completed too quickly and without tight control, they tend to struggle with poor operational performance, safety flaws and losing capacity, making the sector and the government's energy security management less trustworthy (Sabahat Nisar, 2023).

Investment Discouragement:

Because of governance challenges and a weak system of institutions, Pakistan struggles to attract energy investments from within the country and from abroad. Many investors are put off by unclear rules, varying application of contract terms and having no surety about their returns. Because tariff decisions may be kept secret and policies can suddenly change, it is not easy to plan for the future. With unpredictable regulations and no reliable laws in place, investors are reluctant to support big energy projects. As a result, necessary funding for modernizing infrastructure, moving to renewables and improving distribution systems is slow to arrive. Because of this lack of investment, the sector remains technologically stagnant and fails to scale up environmentally friendly solutions needed to meet rising national demand (Dr. Sadia Anjum, 2024).

Operational Inefficiencies:

Flaws in the system seriously affect how energy utilities operate each day in Pakistan. Examples of these hurdles are old energy systems, poorly managed infrastructure and not enough skilled staff to handle them. Transmission and distribution losses often termed "technical and non-

technical losses" are alarmingly high due to aged networks, electricity theft, and inaccurate metering. Because billing systems are inefficient, companies experience delays in collecting their money, recover fewer debts and cause many customers to feel dissatisfied. In addition, customer care is often not responsive and the systems are not digital, so problems and issues are not resolved right away. Such inefficiency in operations makes it harder for companies to supply power reliably and adds extra costs which further highlights the weaknesses in energy systems (Ullah, 2015).

Public Distrust:

People in Pakistan have very little trust in energy institutions because of continuous service failures, scandals of corruption and unclear governance. Many people view the energy sector as unanswerable to the public which discourages them from supporting conservation efforts or complying with their bills and reporting illegal cases. Because of this mistrust, utility providers lose money from customers not paying and from electricity theft, forcing them to cut back on upgrading infrastructure and improving their services. The hidden way tariffs are raised and the changeable load-shedding plans further upset people, mainly those with low incomes. If people regain confidence in the system, reforms can be carried out successfully and the good results can be maintained (Burton, 2023).

Conclusion

In Pakistan, the causes of the energy crisis are more to do with governance and institutions than with technical, financial or resource problems alone. Regardless of major investments in producing electricity over the last few years, the country is still troubled by regular blackouts, high-loss electricity transmission and rising circular debt. These issues reflect a breakdown in how energy management, regulation and governance are handled. A lack of enforcement, changing policies, corruption and mixed duties among institutions have all kept the sector from supplying the energy that is needed in a growing economy. Problems with energy governance have reduced the usefulness of energy policies and made businesses reluctant to put money into needed infrastructure. Regular delays in approving projects, a lack of cooperation between federal and provincial agencies and political moves have made things worse. Energy planning and regulatory bodies tend to lack both the skills and the money they need to carry out their jobs well. Without strict accountability rules, it is easy for people who manage ministries or companies to misuse funds and make bad decisions, without facing serious penalties.

To overcome Pakistan's energy problems, we must move away from quick fixes and temporary political options. Any energy strategy should focus on needed reforms in institutions. Among measures are shielding NEPRA and OGRA from political pressure, drafting precise legal rules and directing their choices with clear data and facts. If the public can watch over government through independent auditors, parliamentary checks and active participation, transparency will rise and people will regain trust. It is also very important to focus on growing the capabilities of institutions, including both employees and technology. Energy planning, forecasting and monitoring depend on current, integrated data systems. It is important that legal changes help eliminate uncertainty, simplify the process and ensure both consumers and investors have enforceable rights. At the same time, preparing a qualified and experienced staff to handle the challenges of the current energy market is very important. Ultimately, Pakistan's energy progress depends on its institutions being able to manage well, rather than only relying on more power or imported fuel. There is no other way to achieve energy security and sustainable economic growth than through emphasizing governance, institutional abilities and a long-term strategy.

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