

PAKISTAN'S ENERGY CRISIS: CHALLENGES AND PATH FORWARD

By
Mian Ahmad Naeem Salik
Research Fellow

Centre for Strategic Perspectives (CSP), ISSI

Edited by
Dr Neelum Nigar

October 9, 2024

(Views expressed in the brief are those of the author, and do not represent those of ISSI)



Introduction: Understanding the Current Energy Landscape

Pakistan is grappling with a multifaceted energy crisis, compounded by political instability and economic stagnation. The country's power sector, a significant contributor to the ongoing crisis, faces inefficiencies that have escalated electricity costs well beyond what many citizens can afford. Public protests over the surging electricity prices reflect the discontent felt by the masses, with economic imbalances deepening due to a growing reliance on external debt.¹ Amid these challenges, Independent Power Producers (IPPs) play a key role in determining the future of Pakistan's energy sector. With circular debt in the power sector rising to Rs 2,310 billion in May 2024, and payments to IPPs nearing Rs 1,800 billion,² the inefficiencies, mismanagement, and lack of transparency in the sector need urgent redressal and reform.

¹ Tehmina Asad, Afia Malik, "Pakistan's energy mess," Dawn, July 15, 2024, <https://www.dawn.com/news/1845916/pakistans-energy-mess>

² APP, "IPPs have destroyed country's economy," Tribune, July 5, 2024, <https://tribune.com.pk/story/2476761/ipps-have-destroyed-countrys-economy>

Role of IPPs: Escalating Costs and Public Discontent

IPPs, especially those established under the energy policies of 1994 and 2002, have come under scrutiny for their contribution to rising electricity costs. As of FY2025, capacity payments alone are projected at Rs 2.1 trillion, a figure that translates to a charge of Rs 17.31 per kilowatt-hour (kWh).³ This has sparked public outrage, leading to calls for the renegotiation of Power Purchase Agreements (PPAs). Protests have erupted across the country, as the steep rise in electricity tariffs is seen as unsustainable, particularly for residential consumers who pay between Rs 6.76 to Rs 48.84 per unit.⁴

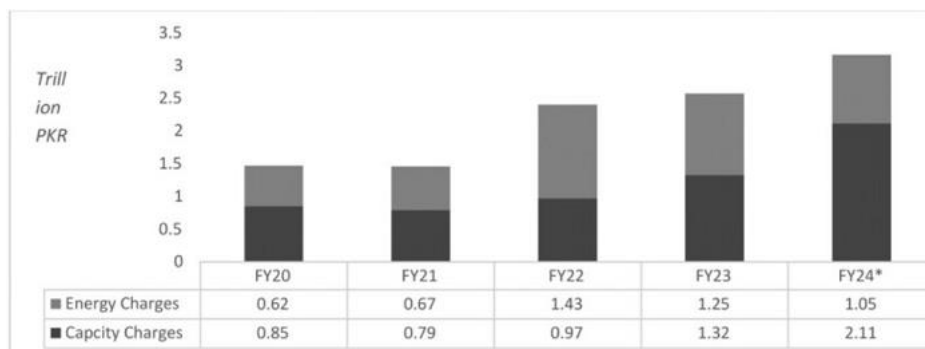


Figure: Capacity Payments⁵

A significant source of discontent lies in the capacity payments made to IPPs, which represent the third-largest debt obligation after defence and foreign debt.⁶ Capacity payments to IPPs are made regardless of actual power generation, which results in a financial strain on the government and consumers alike. Despite ongoing payments, Pakistan's circular debt continues to climb, driven by poor recoveries, operational inefficiencies, and misaligned policies.⁷

Contractual Concerns and Transparency Issues

The increasing burden of IPP payments has raised concerns about the contractual agreements with IPPs. Many contracts obligate the government to make payments to IPPs regardless of whether power is generated or not, further intensifying the crisis.⁸ In some instances, the government has continued

³ Afia Malik, Ayesha Rehman, "The power struggle: navigating Pakistan's energy crisis," Business Recorder, September 3, 2024, <https://www.brecorder.com/news/40320524>

⁴ ibid

⁵ Kamran Arshad, "The burgeoning burden of capacity payments," Business Recorder, June 6, 2024, <https://www.brecorder.com/news/40307052>

⁶ APP, "'IPPs have destroyed country's economy'," Tribune, July 5, 2024, <https://tribune.com.pk/story/2476761/ipps-have-destroyed-countrys-economy>

⁷ Dr Abedullah Anjum, Usama Abdul Rauf, "The IPP deals that keep draining," News, August 2024, <https://www.thenews.com.pk/magazine/money-matters/1223667-the-ipp-deals-that-keep-draining>

⁸ Afia Malik, "Corporate Window: IPPs and Capacity Payments," Dawn, July 29, 2024, <https://www.dawn.com/news/1848654>

to make capacity payments to non-operational plants, while also subsidizing maintenance and insurance costs, despite the terms of the contracts. This has led to widespread allegations of over-invoicing and inefficiencies. For instance, some wind power plants in Pakistan were commissioned evidently at costs up to four times higher than similar projects in Bangladesh and Vietnam, raising concerns about transparency and corruption.⁹

Moreover, IPPs relying on imported fuels, despite Pakistan's domestic coal reserves, further inflate electricity costs. Some IPPs have failed to deliver the expected power output despite benefiting from government subsidies, while take-or-pay contracts have compelled the government to pay for unused power.¹⁰ This mismanagement has exacerbated the financial strain on the government and consumers alike, prompting demands for forensic audits and greater accountability within the IPP sector.

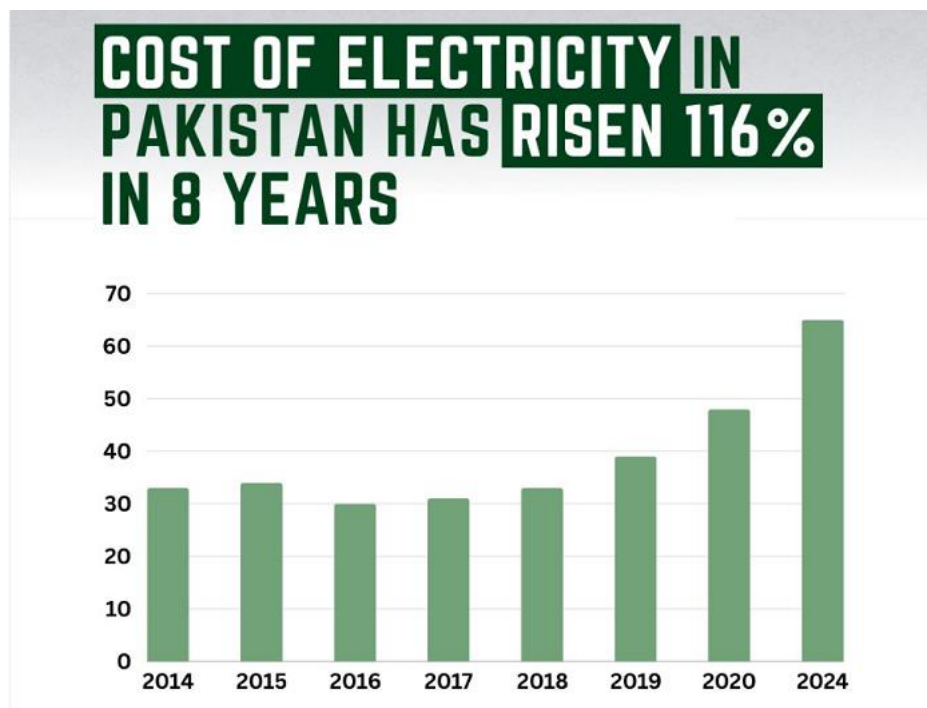


Figure: Residential Electricity Price (PKR/Unit)¹¹

⁹ Ahmad Ahmadani, "IPPs allegedly pocketed billions without power generation, over-invoicing," Pakistan Today, September 22, 2024, <https://profit.pakistantoday.com.pk/2024/09/22/ipps-allegedly-pocketed-billions-without-power-generation-over-invoicing/>

¹⁰ Bilal Hussain, "Pakistan's economic crisis is largely due to its power sector: experts propose bypassing govt," Business Recorder, July 10, 2024, <https://www.brecorder.com/news/40312262>

¹¹ "Cost of Electricity in Pakistan has risen by 116% in 8 years," Climate Finance Pakistan, Accessed on September 24, 2024, https://www.linkedin.com/posts/climatefinancepk_electricity-prices-in-pakistan-have-surged-activity-7228709482304802816-Wx-E

Government Response and the Need for Reform

The government has recognized the need for significant reforms within the IPP framework, adopting a cautious approach toward renegotiating IPP contracts. Rather than taking unilateral action, the government is engaging with IPPs to find mutually agreeable solutions. Power Minister Awais Leghari has emphasized the importance of maintaining investor confidence while ensuring accountability. The government aims to reduce electricity tariffs, a critical factor in stimulating economic growth, while addressing the long-term sustainability of the IPP model.¹²

A Task Force has been set up to review IPP agreements, focusing on transitioning from "take-or-pay" to "take-and-pay" models. This shift would allow the government to pay for actual electricity generated rather than being locked into paying for unutilized capacity. The Task Force is also exploring the option of net present value for projects nearing completion and establishing fixed operational costs for short-term contracts.¹³ In addition, negotiations with private IPPs are ongoing, with some agreeing to lower tariffs in the national interest. Over 100 powerhouses are under review, with phased shutdowns and tariff reductions being considered as possible measures to alleviate the energy crisis.¹⁴

Regulatory Bodies and Future Investments

A significant criticism of Pakistan's energy sector is the inefficiency of regulatory bodies, particularly the National Electric Power Regulatory Authority (NEPRA). Observers point out that despite receiving a roadmap in 2012 to reduce transmission and distribution losses, NEPRA has implemented ineffective measures, allowing the situation to worsen. Rising system losses, high tariffs, and poor oversight have shifted the financial burden onto consumers while leaving critical inefficiencies unaddressed.¹⁵

The 2020 Power Sector Inquiry Report revealed deep-rooted problems in the energy sector, including outdated state-owned generation companies (GENCOs) and inefficiencies in IPP operations. One of the primary issues identified was inflated invoicing, with capacity payments being made without

¹² Khaleeq Kiani, "Major cut in electricity prices unlikely soon: power minister," Dawn, September 21, 2024, <https://www.dawn.com/news/1860117/major-cut-in-electricity-prices-unlikely-soon-power-minister>

¹³ "Power minister says 'govt cautiously navigates complex IPPs issue'," Pakistan Today, August 31, 2024, <https://profit.pakistantoday.com.pk/2024/08/31/power-minister-says-govt-cautiously-navigates-complex-ipp-issue/>

¹⁴ "Govt expects tariff relief following review of independent power producers," AAJ News, September 21, 2024, <https://english.aaj.tv/news/330380495/govt-expects-tariff-relief-following-review-of-independent-power-producers>

¹⁵ Arshad H Abbasi, "The growing circular debt burden," Tribune, March 19, 2024, <https://tribune.com.pk/story/2459784/the-growing-circular-debt-burden>

verifying the actual power supplied.¹⁶ Moreover, observers contend that some projects under the China-Pakistan Economic Corridor (CPEC), primarily coal-fired power plants, have added to the cost burden, with imported fuel raising operational expenses and capacity payments.¹⁷

Looking ahead, major infrastructure projects like the Diamer-Bhasha Dam and Chashma Nuclear Plant C-5 will require careful consideration to avoid further tariff increases.¹⁸ Hydroelectric power, while crucial for Pakistan's energy mix, may contribute to rising electricity costs if not managed efficiently. The government must reconsider future energy contracts, particularly focusing on renewable energy projects to diversify the energy mix and reduce reliance on imported fuels.

The Path Forward: Comprehensive Energy Reforms

Pakistan's energy crisis is not solely the result of rising costs; it also stems from structural inefficiencies, outdated infrastructure, and a lack of accountability. The country's reliance on imported fuels, coupled with the depreciation of the rupee, has exacerbated the problem. To address these challenges, comprehensive reforms are needed across-the-board.¹⁹

The government must prioritize investment in renewable energy, which offers a sustainable and cost-effective solution to the country's energy needs. Solar, wind, and hydroelectric power projects can reduce Pakistan's dependence on expensive imported fuels while mitigating the impact of rising tariffs on consumers.²⁰ Forensic audits of IPP contracts are essential to identifying discrepancies and providing a foundation for renegotiation.

Additionally, the transition to a Competitive Trading Bilateral Contracts Market (CTBCM) has stalled, primarily due to unresolved disputes between stakeholders. Without progress on this front, the inefficiencies in the power sector will continue to hinder the country's economic growth.²¹ Structural

¹⁶ Shahid Kardar, "Renegotiating Agreements with IPPs to Reform the Energy Sector," PIDE Discourse 2023, Accessed on September 24, 2023, <https://pide.org.pk/research/renegotiating-agreements-with-ipp-to-reform-the-energy-sector/>

¹⁷ Afia Malik, "Corporate Window: IPPs and Capacity Payments," Dawn, July 29, 2024, <https://www.dawn.com/news/1848654>

¹⁸ Israr Khan, "Amid energy overcapacity concerns: Govt reviews hydel, nuclear power projects," News, August 31, 2024, <https://www.thenews.com.pk/print/1225652-amid-energy-overcapacity-concerns-govt-reviews-hydel-nuclear-power-projects>

¹⁹ Afia Malik, "Improving state-owned Discos," Dawn, June 10, 2024, <https://www.dawn.com/news/1838812/improving-state-owned-discos>

²⁰ Dr Samuel Rizk, "Securing Pakistan's energy needs,"

²¹ Afia Malik, "Corporate Window: IPPs and Capacity Payments," Dawn, July 29, 2024, <https://www.dawn.com/news/1848654>

reforms are also required in the tax collection system, which remains inefficient and contributes to the government's fiscal challenges.

The heavy burden of capacity payments in electricity costs must be addressed through renegotiation of IPP contracts. Failure to reform the current energy system will only intensify public dissatisfaction and social unrest. A holistic approach, focused on governance, accountability, and efficiency, is crucial to resolving the energy crisis.²² The government must also improve local production, develop a skilled workforce, and enhance transparency in the energy sector to ensure long-term sustainability.

Conclusion: Toward a Sustainable Energy Future

Pakistan's energy crisis represents a significant challenge, but it also presents an opportunity for transformational reform. The reliance on IPPs and imported fuels has led to unsustainable costs and widespread public discontent. The solution lies in addressing inefficiencies, renegotiating flawed contracts, and prioritizing renewable energy projects. By focusing on accountability, governance, and a diversified energy mix, Pakistan can chart a path toward a more sustainable and affordable energy future. These reforms will be critical not only for reducing electricity costs but also for stimulating economic growth and addressing the concerns of the Pakistani people.

²² Shahid Kardar, "Renegotiating Agreements with IPPs to Reform the Energy Sector," PIDE Discourse 2023, Accessed on September 24, 2023, <https://pide.org.pk/research/renegotiating-agreements-with-ipp-to-reform-the-energy-sector/>