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Edward Miller
May 2026

Paying more for less

Payments and profits in Pakistan's privatised power sector

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Foreword

Pakistan's electricity consumers are paying more than ever — yet the lights still go out. This contradiction sits at the heart of a structural crisis three decades in the making, and it demands honest scrutiny. This study, jointly commissioned by Friedrich Ebert Stiftung (FES) Pakistan and Public Services International (PSI), provides exactly that: a rigorous examination of how power sector reforms meant to deliver efficiency and affordability have instead produced rising tariffs, ballooning circular debt, and a system that serves investors far better than it serves the public.

Over the past three decades, Pakistan's electricity sector has undergone a profound structural transformation. Policies aimed at attracting private investment succeeded in expanding installed capacity, yet this report highlights a troubling disconnect between capacity growth and actual electricity generation. Instead of delivering efficiency and affordability, the current system has contributed to rising tariffs, mounting circular debt, and increasing financial burdens on consumers.

The findings presented in this study raise fundamental questions about the design and outcomes of power sector reforms. The widespread use of power purchase agreements (PPAs), especially those guaranteeing capacity payments, has shifted significant financial risk onto the public while ensuring stable returns for private investors. This imbalance has contributed to a system where consumers are effectively paying for underutilised assets.

At the same time, Pakistan's broader economic challenges — fiscal constraints, external vulnerabilities, and pressures linked to international financial commitments — have intensified the push towards further privatisation. In this context, evidence-based policy discussion becomes not only relevant but necessary. This report seeks to contribute to that discussion through a detailed analysis of trends, financial flows, and institutional dynamics within the power sector.

The study also underscores the social dimension of energy policy. Rising electricity costs disproportionately affect low- and middle-income households, while transferring essential public utilities to private operators risks deepening inequities in access — particularly as rising tariffs, fixed charges, and the uptake of rooftop solar by higher-income consumers shift a greater share of system costs onto those who remain dependent on the grid. Equitable access to affordable and reliable energy must remain central to any reform agenda.

FES Pakistan and PSI share a long-standing commitment to social justice, quality public services, democratic governance, and inclusive economic development. Through this collaboration, we aim to support informed dialogue among policymakers, researchers, labour representatives, and civil society on the future of Pakistan's energy sector.

As Pakistan navigates its energy transition — balancing economic sustainability, climate commitments, and social equity — the role of public policy and institutional design will be decisive. We hope this study serves as a constructive contribution towards a more transparent, accountable, and people-centred electricity system.

Felix Kolbitz
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Aknowledgement

As Pakistan faces mounting pressure to privatise its electricity distribution sector, the evidence in this report could not be more timely or urgent. The privatisation of parts of the system has already delivered surging costs for households and deepened the debt crisis, and drained public budgets that should be funding hospitals, community health, education and essential services — all while delivering windfall profits to private, usually foreign, investors. Workers in the sector and the communities they serve deserve better, and the decisions made now will shape Pakistan's energy system, its public finances, and the lives of ordinary people for generations to come.

This report would not have been possible without the extensive, rigorous, and deeply factual research of Edward Miller of the Centre for International Corporate Tax Accountability and Research (CICTAR). Edward's meticulous analysis of Pakistan's privatised power reflects the authoritative body of work CICTAR has become renowned for. CICTAR's work is reshaping how workers and policy makers understand and respond to corporate tax avoidance and the financial structures that underpin it. This report is the first by CICTAR in the context of Pakistan, and couldn't be more valuable.

This publication also reflects the ongoing, productive, and deeply committed partnership between Public Services International (PSI) and Friedrich Ebert Stiftung (FES) in Pakistan — a collaboration made real through the tireless dedication of Abdullah Dayo, whose knowledge, relationships, and lifelong passion for justice have been indispensable. Finally, and most importantly, I acknowledge the contribution of All Pakistan WAPDA Hydro Electric Workers Union and the workers of WAPDA, who for decades have held the line — maintaining Pakistan's electricity infrastructure and fighting to keep power affordable and accessible to everyday people. Their struggle is the heart of this report. May their strength endure, our solidarity deepen, and their cause prevail.

Kate Lappin
Asia Pacific Regional Secretary
Public Services International (PSI)

Executive summary

As Pakistan looks to privatise its electricity distribution sector, this report details the disastrous impacts of privatisation in the generation sector.

Pakistan's electricity system is in crisis, not because of a lack of generating capacity, but because the policies implemented to attract the private sector into power generation have resulted in windfall profits, while delivered surging prices for households and businesses. Since 1994 Pakistan has been locked into **"power purchase agreements" (PPAs)** that guarantee private power producers generous **capacity payments** when their plants sit idle. Over the last two years, capacity payments – paying companies not to generate power – have **accounted for more than half the cost of consumer electricity tariffs** – totalling PKR 1.8 trillion in 2024-25.

Despite an 86% increase in install generating capacity over the last decade, **actual generation has increased by only 31% over the same period**. Pakistan now has a surplus of fossil fuel-powered generating capacity – much of which regularly sits idle – generating capacity payment revenue for shareholders and rising costs for consumers. **Private sector generation has actually declined over the decade**, even as profits have surged, helped along by lavish tax incentives.

In 2023-24 the **public sector produced two-thirds of all electricity** in the national grid, often at a fraction of the cost of the private sector. At the same time, public budgets are ultimately lumped with the mounting costs of the **circular debt crisis**, a crisis that emerges upstream from blowout generation costs but accumulates in the distribution sector, where electricity is actually purchased by consumers. Every rupee poured into paying down circular debt is a rupee taken away from schools, hospitals and other **essential public services** – a trade-off created by privatising electricity generation.

The result is a system that generates profits over electricity, imposing rising tariffs that are now pushing households and businesses off the grid entirely. This is accelerating a dangerous **"utility death spiral"**, where relatively wealthier consumers can afford to exit the grid, while poorer consumers are left to carry the growing fixed costs of idle private assets. Capacity payments have become a tax on the poor and a subsidy for private power producers.

Case studies of the largest Independent Power Producers (IPPs) reveal the scale of the problem:

→ Capacity payments accounted for **62%** of the **PKR 851** due to Hubco projects (weighted for share-holdings) in the last eight years. From **2017-18** to **2023-24**, pre-tax profits rose **623%**. In 2022-23 when electricity delivered to the grid declined by **51%**, net income jumped 110%, a quadrupling of profit per unit.

→ **Sahiwal** delivered **53% less electricity** over the five years to 2023-24, yet generated a **259% increase in real cost per unit**, while paying almost no corporate tax.

→ **Port Qasim** delivered **91% less energy** over four years, while its real cost per-unit rose more than **1,000%**.

Meanwhile, public providers such as **WAPDA** continue to deliver a quarter of the country's electricity at a fraction of the cost of private operators. WAPDA now effectively carries the grid, while private firms carry the profit.

The increasingly-fragmented global environment is further heightening risk. **The emerging Middle East conflict is already disrupting global fuel markets**, raising the cost of imported coal and LNG and increasing exposure to dollardenominated PPAs, raising new concerns of debt crises. This compounds Pakistan's structural vulnerabilities, underscores the danger of reliance on imported fuels, and increases the urgency of publicled planning, renewable integration, and systemic domestic resilience.

As IMF pressure to privatise grows, the lessons of the generation sector are clear: **privatisation has increased costs, deepened circular debt and reduced reliability, transferring risk from investors to the public**. Selling the distribution companies to profit-seeking foreign investors threatens to further amplify these failures at the heart of the electricity system.

In recent years Pakistan has made important progress in renegotiating PPAs, but unhelpful profit extraction may nonetheless persist for decades in the sector. At the same time, capturing the benefit of the country's **unprecedented solar boom** to end Pakistan's power crisis is crucial to support economic development. This underscores the vital strategic importance of effective public control, development and management of the electricity distribution sector, which, coupled with the large state holdings in the hydro sector, will provide the cornerstone to Pakistan's transition to a low-emissions economy.

Privatisation in Pakistan's power sector has already cost the country dearly, both in terms of the surging electricity costs and the development opportunities those costs have undermined. As the country struggles to manage its twin economic and energy crises, further privatisation in the distribution sector threatens to lock future generations into a system of high prices, low reliability, and growing dependence on volatile global energy markets.

This report relies on data extracted from the State of Industry reports of Pakistan's National Electricity Power Regulatory Authority. At the time of writing the latest State of Industry report was for the year to 30 June 2025. This material has been supplemented with data from company financial reporting, other financial commentaries and news reports.

Introduction

The government of Pakistan is moving ahead with the proposed privatisation of its state-owned electricity distribution companies, which currently deliver electricity to more than 200 million people across the majority of the country.[1] The move is part of a broader push towards privatisation across the economy, targeting state-owned companies in the rail, steel, airline, logistics and other sectors. This report details the disastrous financial impact of privatisation in Pakistan's electricity generation sector, where trillions of rupees worth of underused generating capacity now generate windfall profits even while total electricity generation hardly moves. Privatisation has done little to increase electricity generation, but it has delivered windfall returns to private shareholders, both in Pakistan and around the world.

This report will review the existing financial impacts of privatisation in the electricity generation sector. **Section One** begins with a discussion on the current privatisation agenda including the electricity distribution companies, a requirement for Pakistan to access IMF relief funds. 1.2 links this with similar pressures in 1994 to implement a framework to attract private investment into the electricity generation sector using a two-part tariff system and tax incentives. 1.3 recounts the parallel story of the privatisation of K-Electric, which was mired in scandal after the private equity fund that acquired it collapsed as part of an alleged complex ponzi scheme, while consumers electricity prices surged.

Section Two then looks at the impacts of power privatisation. It describes the emergence of the problem of circular debt, and the rapid expansion of private investment in the power sector under the China-Pakistan Economic Corridor. 2.1 then looks at the latest decade of capacity and generation data, showing that in recent years rising private sector generating capacity has not translated into an increase in private sector generation, with public capacity carrying the bulk of national demand. 2.2 reviews payment data made under the two-part tariff system, showing that generation costs have more than doubled in the past four years to over 3 trillion rupees, with almost 2 trillion rupees for capacity payments, and only a trillion for energy payments themselves. Surging imported fossil fuel costs, a plummeting currency and the rapid growth of independent solar capacity have together heaped the worst impacts of Pakistan's power crisis onto its most vulnerable.

Section Three then looks at some of the main beneficiaries of capacity payments. It compiles a table of the twenty largest recipients of energy payments, capacity payments, and generation payments (energy and capacity payments), including both public and private recipients. Case studies explore three of the largest recipients of capacity payments – Hubco (which holds interests in six different power stations), Sahiwal Independent Power Producer and Port Qasim. Capacity payment data is

1 Pakistan's ten electricity distribution companies cover most of the country, with the exception of Karachi, where electricity is distributed by K-Electric, a vertically-integrated firm that was privatised in 2005. See Section 1.3 for further details on the privatisation of K-Electric.

matched with financial statements and analyst reports, showing that the surge in capacity payments has delivered these companies windfall profits in recent years, while actual electricity delivered to the grid has hardly risen or in some cases gone backwards. All three are powered by imported coal. These cases are then compared with Engro Powergen and Lucky Electric, powered by local Thar coal, whose use of local Thar coal appears to have somewhat insulated consumers from price rises.

The report concludes by suggesting that Pakistan's power crisis today is the product of its historical privatisations, and cannot be undone by further privatisation in the distribution sector. As the country moves towards increasingly distributed renewable system of energy generation and storage, the role of the distribution sector will become even more important. The potential risk of monopoly profiteering and deteriorating service provision in the distribution sector – as we have seen in generation – is too great to leave it to the private sector.

Pakistan's privatisation programme

The government of Pakistan is now moving ahead with an accelerated privatisation programme, kickstarted with the divestment of First Women Bank in October 2025,[2] and followed in December with the sale of a 75 percent stake on Pakistan International Airlines.[3] Other state-owned companies identified for sale include Pakistan Railways, the Utility Stores Corporation and Pakistan Steel Mills, as well as state holdings in the gas distribution, shipping, housing finance, and life insurance sectors. The electricity sector has also been prominent within the government's privatisation programme. In a high-profile display, the government suspended the CEOs of three state-owned electricity generation companies in December 2024 for stalling reforms,[4] and by July 2025 it had bypassed a stalled open auction, selling approximately 30 obsolete power plants to Wah Industries – a commercial entity under the Ministry of Defence – for PKR 38.26 billion.[5]

The privatisation of Pakistan's state-owned electricity distribution companies ("DISCOs"), has been a fraught process thus far. Sales had been slated to begin as early as April 2025,[6] but financial advisors for the first three DISCO privatisations were only appointed in February 2025. Alvarez & Marsal Middle East were appointed to conduct due diligence, market analysis, investor outreach and transaction structuring for likely the three most attractive sales: Islamabad Electric Supply Company (IESCO), Faisalabad Electric Supply Company (FESCO) and Gujranwala Electric Power Company (GEPCO).[7] In November 2025 the Privatisation Commission appointed Vienna-based Raiffeissen Investment to coordinate work on a second tranche – Hyderabad Electric Supply Company (HESCO) and Sukkur Electric Power Company (SEPCO)[8] – and the Government had been expected to invite "expressions of interest" for the first tranche from January 2026.[9]

2 First Women Bank was established under former Prime Minister Benazir Bhutto, mandated to employ and extend small business loans to women. In October 2025 it was acquired by Abu Dhabi-based International Holding Company, reportedly for US $14.6 million (Rs4.1 billion) under a government-to-government framework. "Federal cabinet approves sale of First Women Bank to UAE entity for $14.6 million" (17 October 2025) Profit by Pakistan Today. https://profit.pakistantoday.com.pk/2025/10/17/federal-cabinet-approves-sale-of-first-women-bank-to-uae-entity-for-14-6-million/

3 In a deal described as Pakistan's first major privatisation in two decades, a consortium headed by the Arif Habib Corporation has emerged as the top bidder for a 75 percent stake in Pakistan International Airlines for US $482.32 million (Rs135 billion) in late December 2025. The top three offers were revealed on live television, followed by a bidding war between Airf Habib Corp and rival Lucky Cement. Ariba Shahid and Mubasher Bukhari "Pakistan's PIA privatisation moves forward following stake bidding war" (24 December 2025) Reuters. https://www.reuters.com/world/asia-pacific/pakistan-receive-bids-pia-privatisation-televised-auction-2025-12-23/

4 "PM orders suspension of three power generation firms CEOs over delays in asset disposal" (21 December 2024) Profit. https://profit.pakistantoday.com.pk/2024/12/21/pm-orders-suspension-of-three-power-generation-firms-ceos-over-delays-in-asset-disposal/

5 Khaleeq Kiani "Govt sells obsolete Genco plants to Wah Industries" (26 July 2025) Dawn. https://www.dawn.com/news/1926637

6 Hasaan Ali Khan "Pakistan to begin privatization of distribution companies by April 2025" (29 August 2024) Arab News. https://www.arabnews.com/node/2569304/amp

7 Ismail Dilawar "Pakistan picks consortium led by Dubai-based firm to advise on power sector privatization" (12 February 2025) Arab News. https://www.arabnews.com/node/2589903/pakistan

8 Rehan Ayub "Pakistan govt inks financial advisory pact for privatisation of two Discos" (27 November 2025) Business Recorder. https://www.brecorder.com/news/40394617/pakistan-govt-inks-financial-advisory-pact-for-privatisation-of-two-discos

9 Ismail Dilawar "Pakistan to formally invite investors for privatization of DISCOs in January - official" (4 December 2025) Arab News. https://www.arabnews.com/node/2625008/pakistan.

This approach of targeting the most successful companies (that have relatively low transmission and distribution losses) for privatisation first has raised concerns from the National Assembly's Standing Committee on Economic Affairs Division,[10] and there appears to have been some juggling of which companies comprise which tranche. By January 2026 IESCO had dropped out of the first tranche, with the government indicating that Letters of Interest for GEPCO and FESCO would be out by then end of January, with the aim of completing those transactions by mid-2026.[11] While this is just months away, the specific mode of privatisation – whether a full divestment of ownership, a long-term concession to operate, or some other model – remains unclear.[12] In March the Government informed the IMF that the first round of privatisations would be delayed until September-October 2026, after the financial advisor (Alvarez and Marsal) had identified new areas of concern.[13]

The most successful historical privatisations are – unsurprisingly – companies that were already in good financial shape. Privatisations rarely turn around zombie or loss-making companies. The privatisation of successful companies often attract wider interest from potential investors and successful first-round asset sales help legitimise a broader asset sales programme. Political momentum helps move later, more problematic sales, where privatisations are more likely to involve unpopular measures like job cuts or price-hikes. Neither early- nor late-stage privatisations are immune from the issue of excessive profitability, which can similarly lead to negative impacts on service delivery or consumer prices.

The risks from privatisation are particularly clear in essential service sectors, like the water, gas, railway networks and the electricity distribution sector. These sectors tend to be "natural monopolies", where capital investment consumes such a large part of revenue that it does not make sense to build multiple competing networks. Concerns around the abuse of monopoly power means that natural monopolies are often subject to strict regulation, for example regulated rates of return. Where public monopolies can use their large balance sheets to absorb shocks, shielding households and businesses during crisis periods, private monopolies confer enormous market power and incentivise profit-seeking behaviour, particularly heightened amidst crises. Profit maximisation squeezes company budgets, reducing funding for long-term capital investments. Pakistan's electricity distribution sector has already experienced significant maintenance deferral, resulting in aging infrastructure that constrains the capacity of the overall system to deliver electricity to consumers. While this cost-cutting degrades the quality and reliability of the service, it can also boost short-term profits (and often cash dividends) for new shareholders. This helps to pump share prices and increase the desirability of those shares. Workers, low-income consumers, women and migrants are often the worst affected by these decisions.

1.1 Pressure to privatise

Privatisation in Pakistan is being pitched by political and financial elites as a response to Pakistan's deteriorating economic position in recent years due in part to the pandemic and a cost-of-living crisis which severely exacerbated existing economic vulnerabilities. Pandemic movement restrictions and

10 Syed Irfan Raza "Privatisation of profit-making Discos worries NA committee" (24 July 2025) Dawn. https://www.dawn.com/news/1926172

11 "Privatisation Commission to offer GEPCO, FESCO to private sector in first phase" (7 January 2026) Profit by Pakistan Today. https://profit.pakistantoday.com.pk/2026/01/07/privatisation-commission-to-offer-gepco-fesco-to-private-sector-in-first-phase

12 "GEPCO and FESCO Chosen for First Phase of Privatisation" (7 January 2026) Lahore Commercial Companies Index. https://lcci.pk/privatisation-gepco-fesco-to-go-as-starters/

13 Shahbaz Rana "DISCOs' privatisation delayed again" (8 March 2026) The Express Tribune. https://tribune.com.pk/story/2596401/discos-privatisation-delayed-again

supply chain disruptions damaged export earnings, while prices for essential imports like food and fuel soared. Together these triggered a severe balance of payments crisis that swallowed significant foreign exchange reserves.

Pakistan has repeatedly been forced to seek bailouts from the International Monetary Fund (IMF), which, in turn, imposes strict "conditionalities", rooted in neoliberal ideology. These measures – including fiscal austerity measures and the privatisation of state assets – are intended to restore financial stability, a process which often raises the cost of living and creates political challenges for the government. Disbursements under Pakistan's US$7 billion IMF bailout package are linked to key economic reforms, such as the privatisation of state assets,[14] which also reflects the significant global demand from private capital for new investment opportunities in essential infrastructure. These domestic pressures now coincide with renewed volatility in international oil and LNG prices, amplifying the economic risks of Pakistan's reliance on imported fuels and its exposure to dollar-denominated PPAs.

The Fund has long recommended Pakistan privatise loss-making state-owned enterprises, which, it argues, hold sizable assets (equal to 44% of GDP, relative to the OECD average of 20%)[15] but deliver relatively low levels of employment and many are loss-making. In May 2024 Prime Minister Shebhaz Sharif announced that his government would go further, privatising all state-owned enterprises, with the exception of strategic entities.[16] Hardline Finance Minister Muhammad Aurangzeb responded by saying that "there is no such thing as a strategic SOE", signaling a more aggressive privatisation push.[17]

Alongside pressure from multilateral lenders, policymakers have increasingly framed privatisation as a way to attract private capital into sectors where the state has struggled to finance upgrades or reduce losses. This reflects an increasingly dominant global trend for investors, in which infrastructure is viewed as an important asset class used to diversify portfolios and secure stable, longterm returns. These narratives have developed further as the Government has identified potential assets that could secure much-needed capital and satisfy the IMF, even as questions remain about whether privatisation can deliver the efficiency and service quality improvements being promised.

Unions have strongly opposed this wave of privatisation, and the government has implemented heavy-handed tactics to move its agenda. In September 2024 the Pakistan government enforced Section 3 of the Pakistan Essential Service (Maintenance) Act 1952, banning trade union activities for all employees in Pakistan's power sector entities. **The All Pakistan WAPDA Hydro Electricity Workers Union (APWHEWU)** sued, and in March 2025 the Peshawar Industrial Court suspended the order, with the National Industrial Relations Commission acknowledging that the order potentially violated workers Constitutional rights.[18]

14 The latest IMF Country Report for Pakistan calls on the government to "Finalize preconditions for the private sector participation processes for HESCO and SEPCO" by the end of December 2026, which reflects public announcements made in January 2026. "Pakistan. Second Review under the Extended Arramgenet under the Extended Fund Facility" (December 2025) IMF Country Report No. 25/332, p85. https://www.imf.org/-/media/files/publications/cr/2025/english/1pakea2025002-source-pdf.pdf

15 "State-owned enterprises in Pakistan: Footprint, performance, fiscal risks and governance" (4 February 2022) IMF eLibrary. https://www.elibrary.imf.org/view/journals/002/2022/027/article-A007-en.xml

16 Hasaan Ali Khan "Pakistan to begin privatization of distribution companies by April 2025" (29 August 2024) Arab News. https://www.arabnews.com/node/2569304/amp

17 "Finance Minister says no such thing as strategic state owned enterprises" (12 May 2024) Business Recorder. https://www.brecorder.com/news/40303036/

18 Jyotsna Singh "Pakistan Power Workers Restore Trade Union Rights in Court Victory" (19 March 2025) Public Services International. https://publicservices.international/resources/news/pakistan-power-workers-restore-trade-union-rights-in-court-victory?id=15710&lang=en

They maintain that privatisation will do little to resolve the structural causes of sectoral losses, such as chronic underinvestment, weak governance and the legacy of circular debt, but will instead expose employees to outsourcing, casualisation and contract-based employment. They have further warned that transferring essential public utilities to private operators risks deepening inequities in electricity access, particularly as rising tariffs, fixed charges and the uptake of rooftop solar by higherincome consumers shift a greater share of system costs onto lowincome households who remain dependent on the grid.

Policymakers have nonetheless pressed ahead with privatisation at a rapid pace, often with little consultation with affected stakeholders or detailed consideration of the distributional consequences. This approach risks repeating earlier rounds of reform in which major structural decisions were made with minimal transparency, limited public debate, and little regard for the impacts on workers or lowincome consumers. *These concerns about the rapid, topdown nature of the reforms have been echoed even more forcefully by unions and worker organisations, who see the privatisation agenda as a direct threat to both labour rights and the accessibility of essential services.*

1.2 Attracting private investment in the power sector

Today's push to privatise reflect the unique role of the public sector in Pakistan's economic development. Following the disastrous impact of the 1971 war with India that severed East Pakistan (now Bangladesh), Zulfikar Ali Bhutto's Pakistan Peoples Party was elected on a platform of Islamic socialism, committing that "all enterprises that constitute the infrastructure of the national economy must be in public ownership".[19] The nationalisation of key industries like cement, steel and fertiliser consolidated economic activity in key sectors during a period of unprecedented disruption, with the impact of the war and the loss of East Pakistan magnified by floods and oil shocks, however the subsequent shift toward non-democratic rule limited the extent to which these institutions could fully benefit working people.. Bhutto's impact was also felt in the power sector. The vertically-integrated **Water and Power Development Authority (WAPDA)** controlled a substantial proportion of the country's electricity generation, transmission and distribution activities.[20] WAPDA has been a key instrument of state-led development, alongside expanding rural electrification, the hydro construction programme (e.g. Tarbela Dam), and integrating water management with agricultural planning.

But by the early 1990s this state-led model came under sustained pressure. In the early 1990s with the encouragement of international financial institutions, Pakistan embarked on a major policy shift: addressing a crippling electricity shortage through the progressive introduction of private sector investment. This began in 1992 with "WAPDA's Strategic Plan" , the decision to "unbundle" WAPDA into separate generation, transmission and distribution functions and the progressive introduction of private sector investment into these spaces.[21] The landmark 1994 Power Policy, developed with financial support from the World Bank,[22] went further, directly subsidising the entry of private investment in the electricity market through generous "power purchase agreements" (PPAs) and tax holidays.

19 Z Akbar Zaidi "Special Report: The Triumph of Populism 1971-1973" (29 September 2017) DAWN. https://www.dawn.com/news/1360571

20 Zainab Khalid and Muhammad Iftihar-Ul-Husnain "Restructuring of WAPDA" A Reality or a Myth" (Winter 2016) The Pakistan Development Review, p350. https://www.researchgate.net/publication/323251710_Restructuring_of_WAPDA_A_reality_or_a_myth#:~:text=Serious%20financial%20crisis,by%20National%20Transmission

21 Usama Qazi and Mirza Jahanzaib "An integrated sectoral framework for the development of sustainable power sector in Pakistan" (6 June 2018) Energy Reports, p377. https://www.econstor.eu/bitstream/10419/187919/1/1-s2.0-S2352484718300234-main.pdf

22 "World Bank assists privatization of Pakistan's power sector" (24 June 1994) World Bank. https://documents1.worldbank.org/curated/en/785291624474741813/pdf/Announcement-of-The-World-Banks-Support-to-Pakistan-for-the-Privatization-of-the-Power-Sector-on-June-24-1994.pdf

PPAs were pushed by multilateral development banks across the Global South[23] as a way of attract private sector investment into risky developing markets. They comprised a two-part tariff structure: a capacity payment and an energy payment, both of which were indexed to the US dollar (to protect investors from currency devaluation risk). Capacity payments are a fixed monthly fee which the government-backed purchaser pays to the IPP simply for making generating capacity available, regardless of whether any electricity was actually generated. Energy payments are a variable cost, paid per kilowatt-hour of electricity produced, that primarily cover fuel costs.

As well as de-risking investment for private capital, the dollar-indexed tariff structure also has the effect of shifting macroeconomic risk onto the public, particularly currency movements. **Because payments are indexed to the US dollar, any depreciation of the Pakistani rupee automatically increases the local currency cost of payments**, regardless of whether plants actually generate electricity. As we will see, sharp declines in the value of the rupee over the past decade has resulted in a proportionate increase in the value of PPA payments, even while the utilisation of plants has fallen.

These risks are magnified for thermal IPPs reliant on imported coal, oil or LNG. Under the "cost-plus" formula used in energy payments, fuel costs are passed directly through to the power purchaser. When international fuel prices rise, IPPs face no commercial incentive to optimise or substitute because the payments are guaranteed.[24] Instead, the entire increase is borne by the system. Because imported fuel is purchased in dollars, a depreciating currency again inflates fuel costs when converted into rupees. This combination of **volatile global energy markets** and **domestic currency devaluation** can produce large increases in energy payments. A further structural flaw arises because **high imported fuel prices can render IPPs too expensive to dispatch**, pushing them down the merit order beneath cheaper hydro, nuclear and domesticfuel generators. In such periods, private thermal plants may generate little or nothing—but **continue to receive full capacity payments**, which are contractually guaranteed and dollarindexed.

Little of this was clear when the blueprint PPA for a 1292MW oil-fired power plant in the Hub region (with company "Hubco") was concluded in 1994, including USD-indexed tariff rates to guarantee returns to investors. The World Bank supported this project, both as a lender – contributing $225 million through the Private Sector Energy Development Fund (alongside Japan Exim, the Italian and French governments and USAID) – and as a guarantor of political risks to a syndicate of commercial banks, fronting up an additional $240 million.[25] The plant opened in 1997 to great public acclaim and this PPA was terminated early in 2024 by way of a negotiated settlement.[26] We look at Hubco in Section 3.3.

A regulator – the **National Electric Power Regulatory Authority (NEPRA)** – was established in 1997 to regulate the electricity generation transmission and distribution sectors, licensing market participants and setting tariffs. In 1998, control over the transmission network was handed to the newly-formed National Transmission and Dispatch Company (NTDC), a state-owned entity responsible for managing the national high-voltage transmission network. The NTDC also acted as a

23 See e.g. Luis Scungio "Gaslighting Ghana: Predatory investments and the role of the World Bank Group in driving fossil fuel debt" (April 2025) SOMO, ActionAid, p45. https://www.somo.nl/download/50917/?tmstv=1761093457

24 Sugandha Srivastav "Asia's Cost-Plus Power Contracts Incentivize Inefficiency and Fraud" (28 July 2025) Energy For Growth Hub. https://energyforgrowth.org/article/asias-cost-plus-power-contracts-incentivize-inefficiency-and-fraud/

25 Michael Gerrard "Financing Pakistan's Hub Power Project. A Review of Experience for Future Projects" (August 1997) The World Bank, p1. https://documents1.worldbank.org/curated/en/797331468759324504/pdf/multi-page.pdf

26 "HUBCO reaches 'negotiated settlement' with govt for early termination of power agreements" (10 October 2024) Business Recorder. https://www.brecorder.com/news/40326440

central power purchaser, buying electricity from generation companies on behalf of ten newly-formed regional distribution companies (DISCOs). DISCOs were responsible for supplying electricity to commercial and residential consumers within their respective areas.

WAPDA itself retained its significant national hydro generation assets, itself using new PPAs to expand its generating capacity over time (these worked somewhat differently in the hydro sector). In 2023-24 WAPDA produced some 26 percent of electricity in the national grid.[27] Thermal capacity was separated into a holding company and then further split into four state-owned corporatised generation companies (GENCOs) in the late 1990s.[28] The newly-formed GENCOs were to compete with other the new private investments in generating capacity, enticed by "power purchase agreements" (PPAs) under the 1994 Power Policy, that offered generous terms to attract investment in new generating capacity by guaranteeing payment for the availability – not necessarily the use – of installed capacity.

PPAs have been the dominant policy tool for increasing generating capacity in Pakistan over the last 30 years, used by both the public and private sector. And, as we will see, PPAs have significantly increased Pakistan's generating capacity, particularly in the last decade. This increase has been spurred on particularly by new thermal capacity, much of which was severely underutilised throughout the 2020s, as the price of fuel rose while Pakistan's exchange rate to the US dollar deteriorated.

PPAs negotiated with IPPs also included tax holidays for specified periods (usually ten years) to further incentivise private investment in the sector. This was formalised in the Income Tax Ordinance 2001[29] as a general exemption for entities involved in the electricity generation sector (the current corporate tax rate in Pakistan is 29 percent). This was intended to further de-risk the long-term investment required for increasing generating capacity, and in doing so reduce the problem of load-shedding. This resulted in major losses for Pakistan's national revenue, and by 2021 the amended Finance Act removed tax holidays for most new power projects.

1.3 Privatising K-Electric

In 2005 the state-owned Karachi Electric Supply Company (KESC) was privatised in an attempt to address losses and mismanagement. Unlike the rest of the country's electricity sector, KESC was sold and remains today a vertically-integrated unit that combines generation, transmission, distribution and retail sales to consumers. In this groundbreaking first privatisation of a public utility, a 73% stake was acquired in a joint venture of two Gulf funds, the Saudi Aljomaih Group and the Kuwaiti National Industries Group through a holding company called KES, while the government maintained a 25.9 percent shareholding.[30] The World Bank played key advisory roles throughout this process, and its investment arm, the **International Finance Corporation (IFC)** provided US$125 million to help support capital investment.[31]

27 State of The Industry Report 2024, National Electric Power Regulatory Authority pp135 and 177. https://nepra.org.pk/publications/State%20of%20Industry%20Reports/State%20of%20Industry%20Report%202024.pdf

28 These are the 880MW Jamshoro Power Company Limited (GENCO-I), the 1743MW Central Power Generation Company Limited (GENCO-II), the 1000MW Northern Power Generational Company Limited (GENCO-III) and the 150MW Lakhra Power Generation Company Limited (GENCO-IV).

29 Part I, Clause 132 of the Second Schedule of the Income Tax Ordinance 2001. https://download1.fbr.gov.pk/Docs/2025881983148210Income-Tax-Ordinance,-2001-Amended-upto-31.07.2025.pdf

30 "IFC Project Information & Data Portal: KESC" International Finance Corporation. https://disclosures.ifc.org/project-detail/SPI/25396/kesc-project

31 "IFC to provide $125 million loan to KESC" (23 March 2007) Business Recorder. https://www.brecorder.com/news/3376626

In 2009 a majority stake in KES was acquired for US$361 million by the Dubai-based Abraaj Group,[32] a private equity fund helmed by Pakistani "impact" investment icon Arif Naqvi. Impact investing – the idea that an investor can have a positive impact while still achieving strong financial returns – has been used to justify private investment in public services like health and education. While Naqvi lived a lavish life and spoke glowingly of the impact model at events like the World Economic Forum, Abraaj typically used complex private equity models structured through tax havens to minimise tax liability.

Abraaj sought to "turnaround" K-Electric by cracking down on electricity theft and reducing labour costs. An initial proposal to cut a third of the workforce was met with substantial worker opposition, however the company was able to cut thousands of jobs in the coming years and achieve profitability for the first time in a decade.[33] However during the 2010s the company accumulated significant debts to its gas supplier, which Abraaj intended to settle through the sale of its controlling stake in a US$1.77 billion sale to Chinese state-owned Shanghai Electric. Media reports speculated that the deal could deliver Abraaj net profits of $570 million if regulatory approval could be achieved,[34] but approval proved difficult. Leaked emails suggested Naqvi had offered a businessman a $20 million bribe to secure the cooperation of then PM Nawaz Sharif and his brother Shabhaz for the deal.[35]

In 2018 increasingly public concerns from investors like the Bill and Melinda Gates Foundation about the management of another billion-dollar Abraaj healthcare fund pushed the fund to collapse. By April 2019 Naqvi was arrested at Heathrow airport on US charges of defrauding investors.[36] Later reporting – including in the book The Key Man by Financial Times journalists Simon Clark and Will Louch – suggest that Abraaj operated a ponzi-like structure in which new investors' money paid returns to prior investors (not profits from existing investments), and that cashflow issues caused by delays in the K-Electric deal may have helped trigger the collapse of the Abraaj empire.[37]

In January 2022 the Dubai Financial Services Authority imposed a record-breaking $136 million fine against Naqvi, which was upheld in January 2023 after Naqvi disputed the findings in Dubai's Financial Markets Tribunal.[38] In March 2023 London's High Court refused to hear Naqvi's last-ditch appeal to extradition requests from the US, where he faces 16 counts of alleged fraud and money laundering allegations,[39] although he appears to still reside in London for now. In a $600 million lawsuit, Abraaj's liquidators have alleged negligence against Abraaj's auditors - KPMG Lower Gulf and KPMG LLP, which is set down for a ten-week trial in October 2026.[40]

32 "Abraaj to acquire Pakistani power company" (16 April 2009) Private Equity International. https://www.privateequityinternational.com/abraaj-to-acquire-pakistani-power-company/

33 Simon Clark and Will Louch "The Key Man: How the global elite was duped by a capitalist fairy tale" (July 2021) Penguin Random House, pp67-69.

34 Kazim Alam "NON-FICTION: THE FALL OF ABRAAJ" (4 July 2021) Dawn. https://www.dawn.com/news/1633062

35 "Abraaj's millions went to Arif Naqvi's own account: US paper" (18 October) The News International. https://www.thenews.com.pk/print/382264-abraaj-s-millions-went-to-arif-naqvi-s-own-account-us-paper

36 Brendan Pierson and Tom Arnold "Top Abraaj executives arrested on US fraud charges" (12 April 2019) Reuters. https://www.reuters.com/article/world/top-abraaj-executives-arrested-on-us-fraud-charges-idUSKCN1RN2P4/

37 Simon Clark and Will Louch "The Key Man: How the Global Elite was Duped by a Capitalist Fairy Tale." (July 2021) Penguin Random House, pp150-154.

38 Hadeel Al Sayegh "Dubai regulator upholds $135.6 million fine on Abraaj founder and former CEO" (3 January 2023) Reuters. https://www.reuters.com/world/middle-east/dubai-regulator-upholds-1356-million-fine-abraaj-founder-former-ceo-2023-01-03/

39 Jane Croft and Simeon Kerr "Abraaj founder fails in final attempt to prevent extradition to the US" (9 March 2023) Financial Times. https://www.ft.com/content/006d0089-8046-47ce-bd87-a07239b061cf

40 At [26], Chief Justice Wayne Martin notes that "[i]f the trial proceeds, it will be the longest trial ever conducted in these Courts". See Abraaj Investment Management Limited (In Official Liquidation) and Abraaj Capital Limited (In Official Liquidation) (complainants) and KPMG Limited, KPMG (A Firm) and KPMG LLP (defendants) Dubai Financial Centre Courts in the Court of First Instance. (27 November 2024) Claim No CFI 041/2021. https://www.difccourts.ae/rules-decisions/judgments-orders/court-first-instance/cfi-0412021-1-abraaj-investment-management-limited-official-liquidation-2-abraaj-capital-limited-official-liquidation-v-1-kpmg-l-12/

Headquartered in Dubai[41] and with its parent company (Abraaj Holdings Limited) and fund manager (Abraaj Investment Management Limited) in the Cayman Islands,[42] Abraaj's collapse highlights the risks of owning essential public services like K-Electric through elaborate tax haven structures. 66.4 percent of K-Electric was owned by a Cayman Island-domiciled non-trading entity called KESP, and a majority interest in KESP was held by a special purpose vehicle called "IGCF SPV 21 Limited".[43] This Cayman holding structure likely relates to minimising liability for capital gains taxes on the sale of the asset, and raises questions about who has benefited from this privatisation. In October 2022 the general partner of IGCF was acquired by Sage Venture Group, a British Virgin Islands-incorporated special purpose company of AsiaPak Investments Limited whose ultimate beneficial owner is Pakistani national Shaheryar Chishty.[44] While ownership remains under litigation, AsiaPak has other interest in the sector, like the 235 MW Liberty Power Station,[45] and investment in the conversion of Jamshoro Power Plant to locally-sourced Thar coal.[46]

In September 2025 after eight years of negotiations, Shanghai Electric finally announced it had terminated its offer to acquire the 66.4% majority shareholding in K-Electric.[47] In January 2026, Abraaj's former Saudi and Kuwaiti co-investors filed a $2 billion arbitration claim against the government of Pakistan under the OIC Investment Agreement and UNCITRAL Abritration Rules, arguing that "shifting conditions, contradictory instructions, and withheld national security approvals" caused Shanghai Electric to withdraw, which they argue amounts to indirect expropriation under international law.[48]

What has been the impact of privatisation for Karachi? The financial centre that is home to some 20 million consumers retains the country' highest electricity costs: in 2022 NEPRA revealed at a public hearing that K-Electric's average power generation is over 300% costlier than in the CPPA-G.[49] Because the consumer price is set by the regulator, the government provides a substantial "tariff differential subsidy" to K-Electric to make up the difference; in 2025 the K-Electric tariff differential is budgeted at PKR 174 billion (US$ 618 million). In addition, load-shedding and rolling blackouts remain persistent problems.[50]

41 Dubai imposes a corporate tax rate of 9%, recently increased from 6%.

42 Note 41, at [5].

43 "Offshore Shareholders Move to Acquire Direct Stake in K-Electric" (13 July 2023) ProPakistani. https://propakistani.pk/2023/07/13/offshore-shareholders-move-to-acquire-direct-stake-in-k-electric/

44 Mushtaq Ghumman "SPV21 files plea in Cayman Islands court for KESP winding up" (13 July 2023) Business Recorder. https://www.brecorder.com/news/40252329/spv21-files-plea-in-cayman-islands-court-for-kesp-winding-up

45 "Liberty power station: Ownership tree" (last updated 5 August 2025) Global Energy Monitor Wiki. https://www.gem.wiki/Liberty_power_station#Ownership_Tree

46 Khurshid Ahmed "Pakistani company to convert Jamshoro plant from imported to local coal for cheaper coal generation" (12 September 2023) Arab News. https://www.arabnews.com/node/2371901/amp

47 "Shanhai Electric Power terminates purchase of stake in KE" (10 September 2025) Dawn E-Paper. https://www.dawn.com/news/1941006

48 Bilal Javed "Gulf investors file $2bn arbitration against Pakistan over K-Electric" (21 January) Minute Mirror. https://minutemirror.com.pk/gulf-investors-file-2bn-arbitration-against-pakistan-over-k-electric-493691/

49 Mushtaq Ghumman "KE's average generation cost 300pc higher than CPPA-G's: Nepra" (26 October 2022) Business Recorder. https://www.brecorder.com/news/40205192/.

50 Amber Danish "How K-Electric's Monopoly Keeps The City In The Dark" (19 August 2025) The Friday Times. https://www.thefridaytimes.com/19-Aug-2025/how-k-electric-s-monopoly-keeps-the-city-in-the-dark

Circular debt, restructuring and CPEC

The impacts of PPAs and capacity payments started to appear in 2006 in the accounts of the unbundled electricity sector entities. The regulator (then the NTDC) noticed an acute cash shortfall, as the revenue collected from distribution companies didn't match the amounts billed by the IPPs (and public GENCOs), who had to pay fuel supplies. Over the coming years, the emerging crisis of "circular debt" caused significant strain on the country's national finances, as the NTDC struggled to pay its bills and the government stepped in to fill the shortfall.

Pakistan again turned to the IMF to provide short-term assistance and "unblock" payments guaranteed under the PPAs. They called for higher tariffs to eliminate the subsidies required, but they also called for further structural changes. While the 2015 power policy sustained the core components of the PPA system, it transferred responsibility over purchasing activities to the newly-establishing "Central Power Purchasing Agency (Guarantee) Limited" (CPPA-G), a monopoly purchaser that buys electricity from all generators in the country (excluding in the K-Electric area) and sells it to the state-owned distribution companies across the country. In the 2020s this has been coupled with a new role of administering the new wholesale electricity market.

Installed capacity has increased quite dramatically since the implementation of the CPPA-G system, however this appears to have been driven less by markets forces and more by geopolitics. While Pakistan remained in the policy orbit of the Washington Consensus institutions, it found cheaper financing and construction costs from Chinese policy banks and state-owned construction companies, with fewer strings attached. In April 2015 Pakistan inaugurated the China-Pakistan Economic Corridor (CPEC) as part of the global Belt and Road Initiative, securing massive, fast-track Chinese financing for new primarily fossil fuel-based generation projects. Energy projects made up the majority of a first wave of these projects ("the Early Harvest"), with the explicit state goal of ending load-shedding.

2.1 Capacity surges while generation flatlines

In the decade to June 2024, total generating capacity in the CPPA-G system increased by 86%, from 22,800MW in July 2015 to 42,512MW in June 2024. These capacity increases have been split evenly between the public and private sector, both of which added another 10.6MW to CPPA-G. By June 2024, private capacity accounted for 46.3% of installed capacity, up from 41% in 2015.[51] The latest State of Industry report shows that capacity growth has now reversed, with total generating capacity declining by 10% (4081 MW), to 38,431 MW.[52]

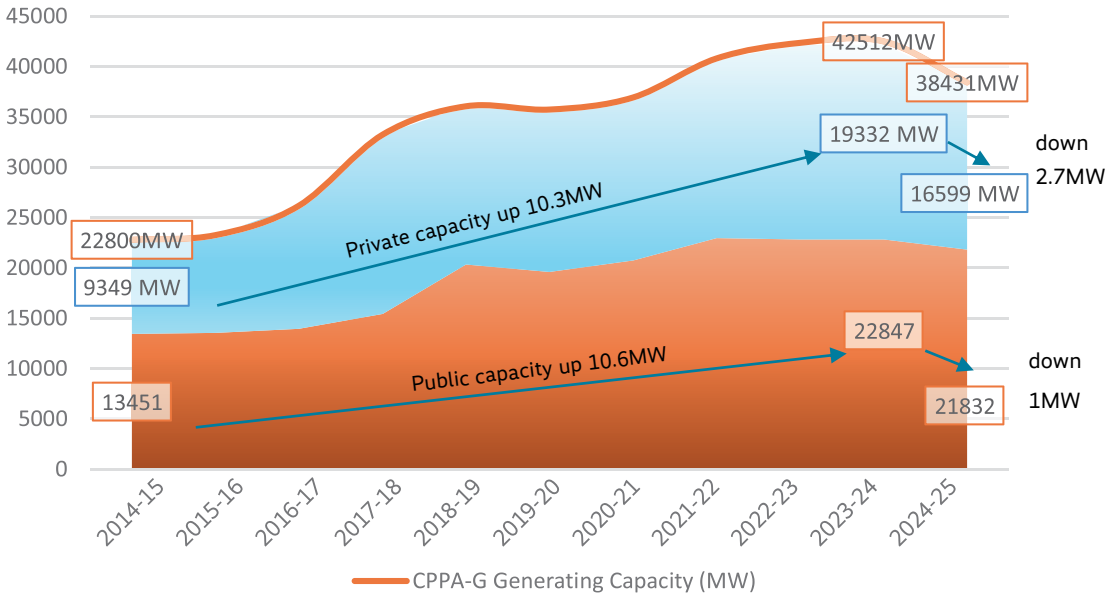
51 Calculated from data in Table 6, NEPRA State of Industry reports 2024, 2020 and 2018. Private sector CPPA-G capacity is not directly reported in the State of Industry reports, but can be calculated by subtracting K-Electric capacity from the CPPA-G total.

52 NEPRA State of Industry report 2025, Table 6.

Figure 1

PPAs drive capacity growth under CPPA-G (MW)

NEPRA State of Industry reports, Table 6



The private sector is leading the declines in generating capacity, accounting for roughly three-quarters of the reduction in capacity.[53] Most of this decline is attributable to the decision of the Pakistan government in October 2024 to terminate five of the oldest PPAs: Hub Power, Rousch Power (which was handed over the government in December 2024), Lalpir Power, Saba Power and Atlas Power, that together accounted for 2.4MW.[54]

Increases in capacity over the decade to 2024 have not correlated with increases in actual electricity generated, which rose only 31 percent over that period.[55] Public sector generators did a lot of the heavy lifting here, with a 68 percent increase in total electricity delivered to the grid, up from 50,174GWh in 2015 – half (51%) of actual generation – to 84,282GWh in 2024 – two-thirds (66%) of generation.[56] Public sector generation declined 4.3% in 2024-25 to 80,633 GWh, but still accounted for 63% of total generation.[57]

Private sector generation, on the other hand, has hardly moved: it hovered around 50,000GWh for most of the last decade, spiking in 2018 (68,679GWh) and 2022 (63,918GWh). By 2024, private sector generation had fallen to 43,555GWh, down 6% over the decade.[58] This climbed 7% (3,234 GWh) in

53 Ibid.

54 Fawad Yousafzai "Govt decides to shut down five IPPs having 2400MW capacity" (8 October 2024)The Nation. https://www.nation.com.pk/08-Oct-2024/govt-decides-to-shut-down-five-ipps-having-2400mw-capacity/

55 Calculated from data in Table 9, NEPRA State of Industry reports 2024, 2020 and 2018.

56 Calculated from data in Table 9, NEPRA State of Industry reports 2024 and 2018.

57 Calculated from data in Table 9, NEPRA State of Industry report 2025.

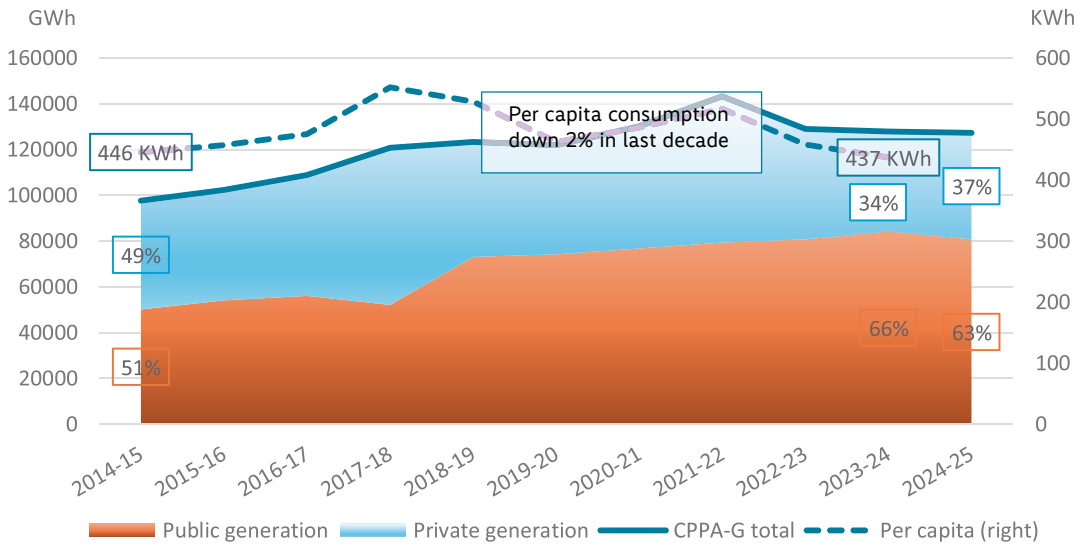
58 Ibid.

2024-25, but remains slightly below the 2014-15 figure, despite the fact that private sector generating capacity is 62% (8381MW) over that period. The failure of the private sector to increase its generation over this period despite the enormous investment in new capacity represents a serious policy failure.

Figure 2

New private capacity fails to deliver new electricity

NEPRA State of Industry reports, Tables 9 and 54



This failure is even more stark when viewed in per capita terms, with per capita electricity consumption declining by 2% over the last decade, dropping to just 437KWh per person in 2024.[59] This annual figure is just 13 percent of the world average (3,486MW in 2022).[60] Annual average consumption is down 9 kWh per person over this period, versus a global average increase of 405KWh per person.[61]

In effect, this means that a significant proportion of new private sector generating capacity has been massively underutilised. Cost-plus provisions in PPA energy payments allow IPPs to pass on the entirety of the surging costs of imported fossil fuels to the CPPA-G. The CPPA-G system favours cheaper electricity with lower marginal cost, and therefore purchases (publicly-owned and operated) hydro and nuclear first, followed by lower cost domestic fossil resources. IPPs that don't sell into the grid are nevertheless compensated for providing capacity to the grid, even if that capacity does not translate into generation. These vulnerabilities are emerging again as the Middle East conflict disrupts fuel markets, pushing up LNG and coal import prices and magnifying the inflationary effects of dollar-indexed capacity and energy payments.

59 The per capita figures in the State of Industry run one year behind (presumably because population data is published later), meaning that the latest figure for this is for the year to 30 June 2024.

60 Electric power consumption (kWh per capita) – Pakistan, World, China, United States https://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC?locations=PK-1W-CN-US

61 Ibid.

What these figures don't capture has been the enormous rise in rooftop solar in Pakistan, mostly off-grid. Net-metered solar capacity doubled to 4.9GW in the nine months to the end of March 2025 alone,[62] however 16.6GW of Chinese solar panels were imported into Pakistan in the year alone.[63] With skyrocketing electricity prices surpassing even rent in the household budget, off-grid solar has allowed households and business across the country to dramatically reduce electricity costs; according the Washington Post solar now "account[s] for around one-fourth of the national power supply.[64]

This imbalance doesn't just distort generation, it also deepens the circular debt crisis, with significant consequences for consumers and the government. When DISCOs fail to achieve their allowed recovery targets due to technical losses, theft, or poor collection, a shortfall emerges. This gap, particularly the non-recovery of the fixed capacity component, creates circular debt, however the gaps emerge because the cost of electricity – inflated by capacity payments and volatile imported fuel charges – far exceed what the DISCOs can realistically recover from consumers. In other words, the government guarantees payments to Independent Power Producers (IPPs) and is therefore responsible to bridge the deficit, either by taking on new debt or issuing subsidies. The circular debt problem is exacerbated by the regulatory mandate for full cost recovery by DISCOs, which requires that all inefficiencies must be recouped from the consumer. This means households and businesses pay not only for the electricity they use but also for systemic inefficiencies and idle plants. The result is a pricing structure that punishes consumers for failures they cannot control, while guaranteeing profits for generators.

In September 2025 the government signed off on a loan facility worth PKR 1.2 trillion with 18 banks to settle outstanding amounts owed to independent power producers,[65] serviced through a surcharge applied directly to consumer bills.

The rapid uptake of rooftop solar has been a lifeline for households and businesses facing soaring electricity prices, and it represents an important step toward a more resilient energy system. However, while rooftop solar offers relief for wealthier households, it compounds the crisis for the poorest, who remain locked into paying for idle capacity. Some DISCOs have responded to this "utility death spiral" by lobbying for monthly fixed charges on solar users,[66] and in December 2025 the government slashed solar buy-back rates by almost 60%, arguing that low-income consumers were effectively subsidising high income solar users.[67]

The remarkable speed of the transition to rooftop solar underscores the importance of sufficient levels of capital investment and strategic orientation in the electricity distribution sector, for which public ownership and control is crucial. Solar generation is intermittent, and therefore needs regional distribution networks and battery storage to effectively balance out daily fluctuations. Managing seasonal fluctuations would probably require larger pumped hydro storage capacity, which WAPDA could help contribute towards. Thermal capacity will still play a firming role but wherever possible

62 Patrick Jowett "Pakistan's net-metering capacity hits 5.3 GW" (2 June 2025) PV Magazine. https://www.pv-magazine.com/2025/06/02/pakistans-net-metering-capacity-hits-5-3

63 https://www.ciphernews.com/articles/chinese-solar-panel-imports-to-pakistan-are-soaring-this-year/

64 Rick Noack and Shaiq Hussain "How Pakistan's solar energy boom led to higher power bills for the poor" (24 August 2025) Washington Post. https://www.washingtonpost.com/climate-solutions/2025/08/24/pakistan-solar-power-renewable-energy/

65 "Aurangzeb terms Rs1.2tr circular debt deal 'largest financing' in Pakistan's history" (25 September 2025) Dawn.com. https://www.dawn.com/news/1944535

66 "DISCOs seek fixed charges on solar net metering to recover losses amid electricity tariff concerns" (5 November 2025) Profit by Pakistan Today. https://profit.pakistantoday.com.pk/2025/11/05/discos-seek-fixed-charges-on-solar-net-metering-to-recover-losses-amid-electricity-tariff-concerns/

67 "Govt revises net metering policy, cuts solar buyback rate" (21 December 2025) The Nation. https://www.nation.com.pk/21-Dec-2025/govt-revises-net-metering-policy-cuts-solar-buyback-rate

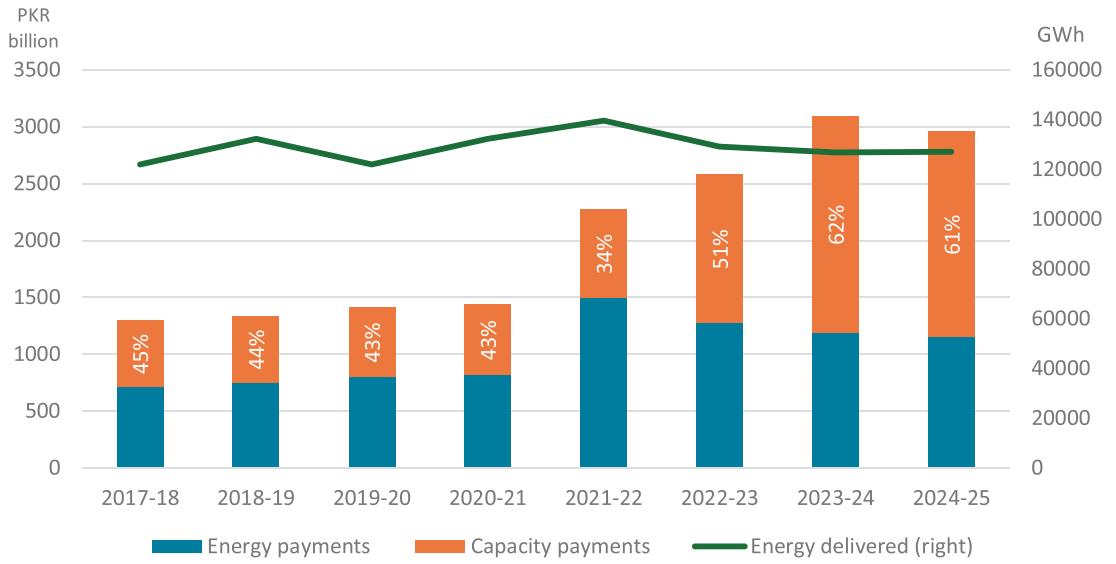
thermal assets should be owned and controlled by the state for the public benefit, given their substantial potential to distort pricing.

2.2 Costing PPAs

Since 2020 the Pakistan electricity sector regulator NEPRA has published comprehensive records of capacity payments to IPPs in its annual "State of Industry" reports.[68] There is now eight years of energy payment and capacity payment data, covering both public and private generators, which we have consolidated into a single dataset.[69] For each of the 115 IPPs now listed in the data we have also made additional calculations,[70] including total IPP payments and average generation cost per unit of energy delivered (this calculation is outlined in more detail in section 3).

Capacity charges surged while generation remains flat

Figure 3



Total payments over this eight-year period have now reached 16.5 trillion Pakistani Rupees (US$58.5 billion), comprising some PKR 8.3 trillion (US$29.4 billion) in energy payments and 8.2 trillion (US$29 billion) in capacity payments.[71] Over the four years from 2017-18 to 2020-21, energy and capacity payments together slowly increased from 1.3-1.4 trillion rupees a year. Energy payments accounted for 57 percent of payments (~800 billion rupees in 2020-21), while capacity payments accounted for 43 percent of payments (~ 600 billion rupees).

A 26% increase in capacity payments in 2021-22 was overshadowed by a massive 83% increase in energy payments to PKR 1.5 trillion, driven by a volatile mix of supply chain disruption, surging fuel

68 See e.g. NEPRA State of Industry 2024.

69 The full eight-year dataset was compiled using data from Table 34 of 2024, 2020 and 2018 NEPRA State of Industry reports.

70 Not all 115 IPPs cover the entire eight-year data duration; some PPAs did not begun until after the 2017-18 year, while others have been terminated prior to the 2024-25 year.

71 Exchange rate for end of 2024-25 year (30 June 2025). Rates obtained from https://www.exchange-rates.org/exchange-rate-history/pkr-usd-2025.

costs after the Russian invasion of Ukraine and Pakistan's own deteriorating currency. From 2022 capacity payments surged ahead – up 145 percent in two years, reaching PKR 1.9 trillion in 2023/24 – while energy payments receded. By 2023-24, 62% of payments to power generators were compensation for idle capacity, not for actually supplying electricity. Given generation costs (both energy and capacity payments) made up 83% of consumer tariffs that year,[72] capacity payments accounted for 51% of consumer tariffs that year. In 2024-25 both energy and capacity payments were down slightly (3 and 5% respectively), with capacity payments still account for 61% of electricity generation prices,[73] some 50% of the consumer tariff.

In 2023-24, electricity generation costs amounted to some 2.9 percent of Pakistan's GDP,[74] with capacity payments swallowing some 1.8 percent. Capacity payments in 2023-24 were equal to roughly 13.4 percent of the Pakistan national budget. Payments amounted to more than the substantial expenditure allocated to the Defence budget,[75] or more than double the size of the national education budget. Taking the 2023-24 figure as a benchmark, capacity charges for that year alone were greater than Pakistan's total IMF debt.[76] The government does not directly pay these costs; rather, the power purchaser—the Central Power Purchasing Agency (CPPA-G)—bills them to the Distribution Companies (DISCOs), which then charge end-users.

72 NEPRA State of Industy Report 2023-24, p5.

73 NEPRA State of Industry Report 2024-25, Table 34.

74 GDP for the year ending 30 June 2024 was PKR 106.5 trillion. See "Press Release (30th December 2024) National Accounts Committee Meeting" (30 December 2024) p2. https://www.pbs.gov.pk/sites/default/files/press_releases/2024/Press%20release%20for%20111th%20NAC%20Meeting.pdf

75 "Federal Budget of 2024-25: An Overview of Strategies and Priorities" (June 2024) Social Policy and Development Centre, p4. https://www.spdc.org.pk/assets/upload/6679527d4f1b5-SPDC_PB_Budget%202024-25.pdf

76 At the time of the release of the 2024 State of Industry report, Pakistan's IMF debt stood at US$6.7 billion. This has now risen to US$7.3 billion, putting Pakistan fourth behind Argentina (US$41.8 billion), Ukraine (US$11 billion) and Egypt (US$7.6 billion). https://www.imf.org/external/np/fin/tad/balmov2.aspx?type=TOTAL

Who has benefited from PPAs?

PPAs stipulate two price components in determining payments to IPPs: the **energy payment** and the **capacity payment**; together these make up **power purchase payments**. Table 1 contains the twenty largest recipients of energy payments and capacity payments, as well as the total generation charges (combined energy and capacity payments) over the seven years of data we have available.

Table 1

Top 20 energy and capacity payment recipients

Cumulative (2017-18 – 2024-25), highest to lowest						
	Top 20 energy payment recipients		Top 20 capacity payment recipients		Top 20 power purchase payment recipients	
	Power Plant	Energy payments PKR million	Power Plant	Capacity payments PKR million	Power Plant	Combined PKR million
1	HBS	857,802.53	WAPDA	675,410.52	Sahiwal Imp.	1,193,073.81
2	Balloki	783,037.94	Sahiwal Imp.	607,468.52	Port Qasim	1,049,883.19
3	Quaid-e-Azam Thermal	675,535.73	Port Qasim	605,102.44	HBS	1,032,788.57
4	Sahiwal Imp.	585,605.29	China Power	538,995.41	Balloki	954,343.77
5	Port Qasim	444,780.75	KANUPP-II	403,399.45	Quaid-e-Azam Thermal	886,694.85
6	Engro Powergen. Thar	403,933.58	KANUPP-III	341,719.05	China Power	788,575.68
7	KAPCO	318,631.47	Engro Powergen. Thar	328,926.61	Engro Powergen. Thar	732,860.19
8	GENCO-II	298,695.64	Thar Coal-I	303,172.50	WAPDA	694,004.99
9	Uch Power	288,460.89	CHASNUPP-IV	281,184.17	Thar Coal-I	547,116.00

10	China Power	249,580.27	CHASNUPP-III	257,148.44	KAPCO	444,137.32
11	Thar Coal-I	243,943.50	Karot Hydro	224,963.04	KANUPP-II	441,605.02
12	GENCO-III	232,460.51	Quaid-e-Azam Thermal	211,159.12	GENCO-II	421,047.89
13	Uch-II Power	184,869.83	CHASNUPP-II	193,008.70	KANUPP-III	373,804.08
14	Punjab Thermal	141,828.88	Neelum Jhelum	182,732.06	GENCO-III	362,093.93
15	Liberty Daharki	135,969.99	Hub Power	180,950.41	Uch Power	347,500.83
16	Orient Power	107,573.47	HBS	174,986.04	Uch-II Power	309,998.68
17	Lucky Electric	88,147.63	Balloki	171,305.83	CHASNUPP-IV	309,539.00
18	Liberty Power	77,387.09	Lucky Electric	156,480.80	CHASNUPP-III	283,313.77
19	Sapphire	75,865.03	GENCO-III	129,633.42	Lucky Electric	264,054.27
20	Pak Gen. Power	75,300.80	KAPCO	125,505.85	Karot Hydro	230,221.79
TOP 20		6,269,410.82		6,093,252.38		
% of total		75%		74%		70%

NEPRA SIR reports.

The Top 20 energy payment recipients received a cumulative PKR 6.3 trillion, some 75 percent of total energy payments over that eight-year period for generating electricity. The Top 20 capacity payment recipients received a similar amount over that period – PKR 6.1 trillion – to not generate electricity, accounting for some 74 percent of the total recipients. The 29 power plants included in Table 1,[77] that together account for some 81% of EPPs, 83% of CPPs and 82% of total generation payments. All entries in the third list (total generation payments) appear already in either the energy payments list or the capacity payment list.

Twelve of the 29 entries in this list are publicly-owned, including ten owned by the Government of Pakistan and two by the State Government of Punjab. The ten Government-owned companies comprise four nuclear units (KANUPP-II and CHASNUPP II, III, and IV) under the control of the Pakistan Atomic Energy Agency, GENCO-II[78] and GENCO-III, HBS, Balloki, WAPDA and Neelum Jhelum. These ten entities have a combined generating capacity of 19,404MW, including 10,918MW of hydro capacity, 5,358MW of thermal capacity and 3,128MW of nuclear capacity.

77 WAPDA is presented as a single entity in the State of Industry reports which contains a significant portfolio of hydro assets. It should be noted that WAPDA also operates other assets across the country, including hydro projects build under the China-Pakistan Economic Corridor.

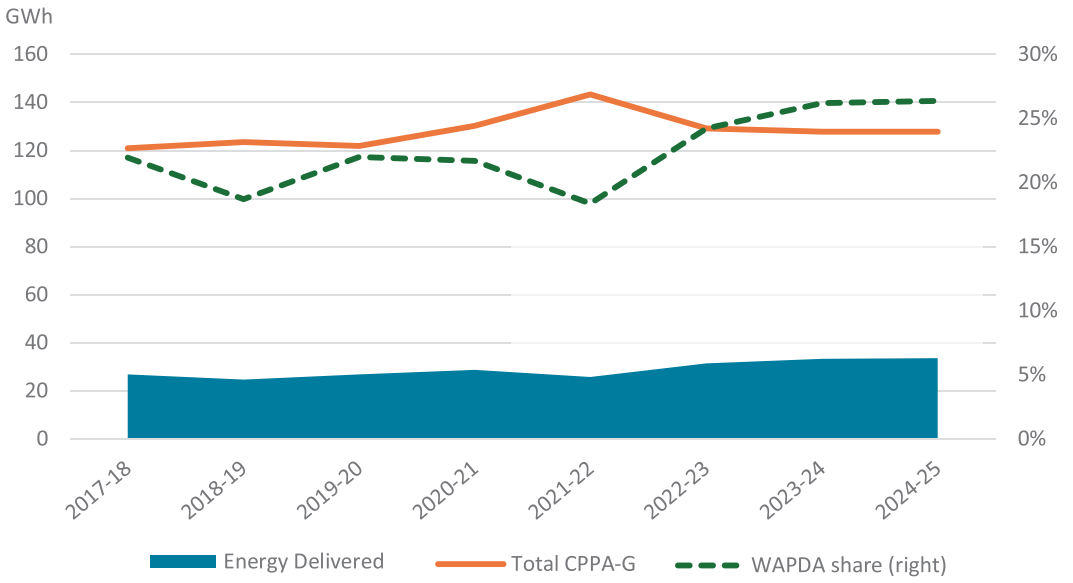
78 The 1762MW Guddu thermal power station in Sindh Province https://www.gem.wiki/Guddu_power_station

Together these ten companies delivered some 49 percent of all energy to the CPPA-G system over the eight-year period, but accounted for only 32 percent of total generation costs (29 percent of energy charges and 36 percent of capacity charges. This would appear to suggest significantly lower overall electricity costs from the public sector, an important consideration for future policy decisions.

The private sector companies in our focus group, on the other hand, account for 50 percent of total generation costs (52 percent of energy charges and 47 percent of capacity charges), but generated only a third (34 percent) of energy delivered into the CPPA-G system over the seven-year period. The government of Punjab owns another two IPPs: Quaid-e-Azam Thermal and Punjab Thermal, that together deliver 6 percent of national power.

WAPDA's growing energy share

Figure 4



Despite the surge of private sector investment in the last decade, WAPDA remains the real powerhouse of electricity generation in Pakistan. Generation from WAPDA's 9499MW of installed capacity has increased steadily over the past four years while private fossil fuel generation has declined dramatically, and by 2024-25 WAPDA accounted for some 26 percent of generation into the grid. And, while an increase in capacity payments increased WAPDA's average real electricity cost by 69% to PKR 5.5 per MWh (this calculation is explaind in the next paragraph), it remains one of the cheapest generators in the country - far below most major IPPs - and unmatched in scale.

Tariff rates under PPAs are set by the regulator (NEPRA), but the actual cost of electricity to the system is calculated as the sum of (cost-plus) energy payments and capacity payments, divided by the actual energy delivered to the grid. This metric highlights the distortion created by idle capacity: when generation falls but capacity payments remain fixed, the real per-unit cost of electricity rises dramatically. In recent years, this dynamic has driven steep increases in average electricity prices, even as total generation has stagnated, and why power plants that deliver less energy can still receive enormous payments, generating windfall profits for shareholders.

$$\text{Real cost per Gwh} = \frac{\text{Energy payments + Capacity Payments}}{\text{Actual energy delivered}}$$

The remainder of this section will look at some of the largest beneficiaries of the capacity payments system, with a focus on newly-built thermal capacity that relies on imported fossil fuels. First we look at the Hub Power Company, a company listed on the Pakistan Stock Exchange that has shareholdings in some 3,581MW of generating capacity across six projects including China Power Hub Generation Company. Next, we look at Sahiwal Independent Power Producer, the largest-single plant recipient of capacity payments over the period, followed by Port Qasim, which appears to experience a more than thousand percent price increase over the data period. Next we compare these imported fossil fuel-fired projects with Thar coal-powered projects like Engro Powergen and Lucky Electric Power Company.

3.1 Hub Power Company Limited (HUBCO)

Table 2

HUBCO 2025 financial statements, pp21-22.

Project	Capacity (MW)	Share holding (%)	Weighted capacity (MW)
Hub Power	1292	100	1292
China Power	1320	47.5	627
Narowal	225	100	225
Thar Energy Ltd	330	60	198
Thal Nova	330	38.3	126.4
Laraib	84	74.95	63
TOTAL	3581	-	2531.4

The Hub Power Company (HUBCO) was the first company to negotiate a PPA with the Pakistan government in 1992, preceding even the 1994 Power Policy. In 2023-24 HUBCO had become the largest IPP, with ownership interests in 3,581 MW in generating capacity in 2024[79] or 2531MW when weighted for shareholding,[80] some six percent of national generating capacity. In 2024-25 Hub Power agreed to the early termination of their PPA, which accounted for more than half of their weighted capacity. Its large shareholding in imported coal-burning China Power still delivers substantial capacity payments, and its shareholdings in local thar coal projects Thar Energy and Thal Nova and 84MW Laraib Energy are expected to lower the company's overall real energy costs somewhat.

79 "HUBCO Annual Report 2024", p14. https://hubpower.com/wp-content/uploads/2024/09/HUBCO-AR-Final-Low-Res.pdf

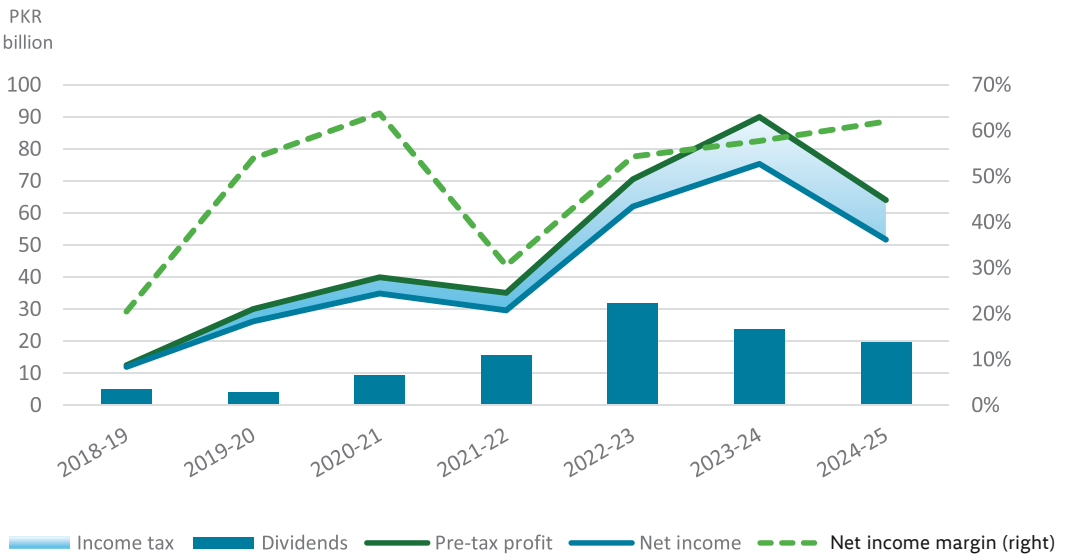
80 Ibid, p175.

These six projects have received some PKR 525.4 billion in energy payments over the past eight years and PKR 960.2 billion (over a trillion) in capacity payments, totaling PKR 1.48 trillion. 56% of the capacity payments received by HUBCO projects over this period – some PKR 538 billion – are consumed by one single project, China Power Hub Generating Company, of which Hubco has a 47.5 percent shareholding (the remaining 52.5 percent shareholding is held by China Power International).[81] When weighted for Hubco's shareholding in these projects, payments total PKR 860.2 billion, made up of PKR 317.9 billion in energy payments and PKR 542.3 billion in capacity payments (62%).

Figure 5

Hubco's profit growth

Hubco annual reports



Hubco has enjoyed enormous profit growth in recent years. While Hubco's consolidated financial statements don't clearly show total group revenue, pre-tax profit has grown by a staggering 623 percent in six years to 2023-24, from PKR 12.4 billion to PKR 90 billion. Profits took a hit in 2021 and 2022 on the back of rising fuel costs but have bounced back strongly since then. This has been helped by the beginning of operations for Thal Nova and Thar Energy Limited in 2023, however until the closure of Hub Power their weighted generating capacity of 324.4 MW represented just 13 percent of total capacity. Net income (after-tax profit) over these six years totaled some PKR 239 billion. Net income margins average 49 percent over this period, peaking at 64 percent in 2020-2021, staying above 50% in each of the last three years and again cracking 60% in 2024-25.[82] This rising margin was achieved amidst declining revenue and profit, as the company rationalises the economic impact of the closure of the Hub Power.

81 Id, p39.

82 "Hubco Annual Report 2025" p276. https://hubpower.com/wp-content/uploads/2025/09/HUBCO-Integrated-Annual-Report-2025.pdf

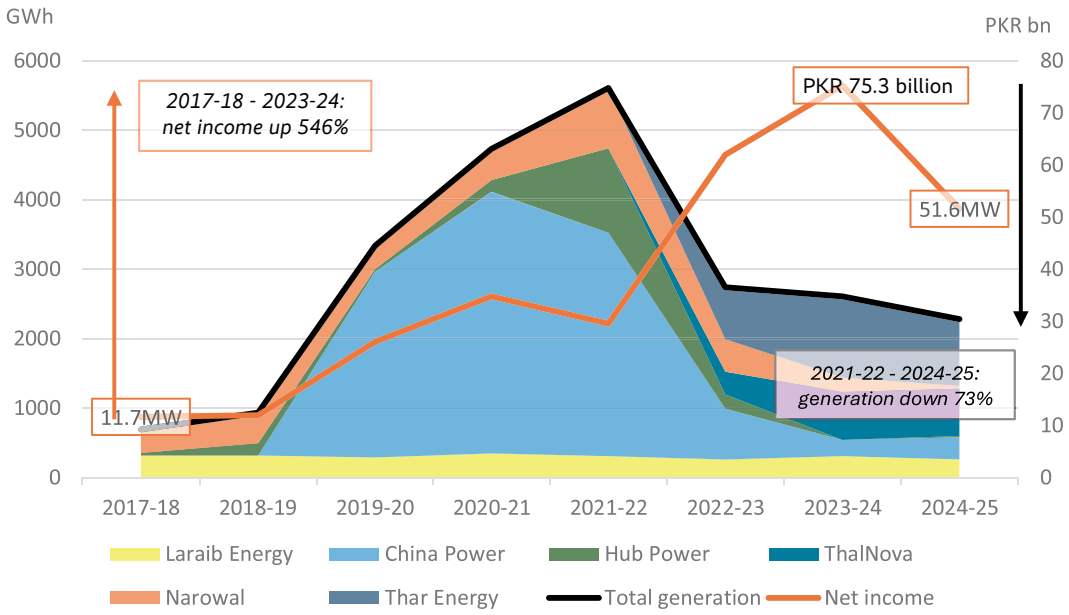
Hubco is listed on the Pakistan Stock Exchange. Its largest shareholder is the Mega Conglomerate with 19.4 percent of shares,[83] followed by the Fauji Foundation with 8.5 percent.[84] Those shareholders have enjoyed substantial cash dividend payouts in recent years, peaking at PKR 31.8 billion in 2023 (a 531 percent increase on 2018 payouts) and totaling PKR 86.4 billion over the period (US$ 302 million). These figures are many times larger than labour costs, which totaled only PKR 2.8 billion in 2024, up 17 percent on 2018 figures. In May 2025 Hub Power again received an AA rating from the Pakistan Credit Rating Agency.[85]

Tax expenses did increase substantially over this period – up 2320% in the last eight years – although this is off a very low base. 2028-19's income tax expense totaled just PKR 516.7 million, a tax rate of just 4 percent. By 2024-25 this number had reached PKR 12.5 billion, a tax rate of 20 percent, still below the corporate tax rate of 29 percent. Much of this difference can be attributed to the income tax exemption enjoyed in the first ten years of operation under the Income Tax Ordinance. This likely means that by 2024-25 profits related to Hub Power, Narowal and Laraib - together accounting for 64% of generating capacity - are now outside the exemption period and therefore subject to corporate income tax.

Figure 6

Hubco energy delivered (weighted) and net profit

NEPRA State of Industry reports and Hubco annual reports



83 Mega Conglomerate (Pvt) Ltd has interests in the energy, cement, shipping logistics, real estate, oil and gas and food industries. It is 88% owned by Habibullah Khan and 12% by his wife Nusrat Khan. "Mega Conglomerate (Pvt.) Limited" (13 December 2024) PACRA. https://www.pacra.com/rating-report/MTM3NjA=

84 "The Hub Power Company Limited Credit Rating Report" (June 2025) PACRA. https://www.pacra.com/rating-report/MTQzODc=

85 Ibid.

Despite the addition of Thar Energy and Thal Nova to Hubco's generating assets in 2023, the actual delivery of energy by Hubco assets (weighted for Hubco's shareholdings) have declined by 73 percent over the past four years. In 2022-23 alone when Hubco's delivered energy dropped by 51%, its net income rose by 110 percent; together this represents a quadrupling of after-tax profit per GWh of energy delivered.

The most notable increase and subsequent decline in energy generation was China Power, which became operational in 2020-21, rose to 3,763GWh of annual generation within two years, before declining by 94% over the subsequent three years to just 226.36GWh.[86] Persistently low levels of generation from the 1292MW Hub power plant itself over this period – totaling only 1835 GWh over the six years, just 7.5 percent of generation over the period, despite accounting for some 51 percent of Hubco's weighted generating capacity – underscores how underutilised (and likely underperforming) this asset was before Hubco accepted termination.

Hub Power also appears to have some of the highest cost electricity of all IPPs, with real costs reaching PKR 651.2 million per GWh in both 2018 and 2020. While the plant's PPA wasn't up for expiry until 2027, Hubco accepted an early termination.[87] This notwithstanding, the average cost of electricity across the remaining Hubco portfolio still under PPA coverage reached PKR 147.2 million per GWh in 2024-25, up 575% percent in just three years.

3.2 Sahiwal Independent Power Producer

Sahiwal Coal Power Plant is the largest single power plant recipient of power purchase payments in Pakistan, receiving 1.2 trillion rupees over the last eight years, comprising PKR 607.5 billion in capacity charges and PKR 585.6 billion in energy charges. A flagship CPEC project, Sahiwal's 2 x 660 MW plants opened in 2017 as the first of the "Early Harvest" projects anointed by President Nawaz Sharif as part of the push to end load shedding in Pakistan.

Sahiwal is half-owned by two Chinese state-owned companies, energy company Huaneng Power International and infrastructure developer Jining Chengtou Holding Group Co, with financing from the Industrial and Commercial Bank of China.[88] It is operated by a private company, Huaneng Shandong Ruyi (Pakistan) Energy Pvt Ltd, which, like many international projects by Chinese state-owned companies, is owned via a Hong Kong subsidiary (Huaneng Shandong Ruyi (Hong Kong) Energy Co. Ltd). [89] Unlike listed Hub Power, Sahiwal's private ownership means substantially lower levels of financial disclosure.

86 These data are weighted for Hubco's 47.5% shareholding in China Power. Total electricity delivered to the grid declined from 7923GWh in 2020-21 to 477GWh in 2023-24.

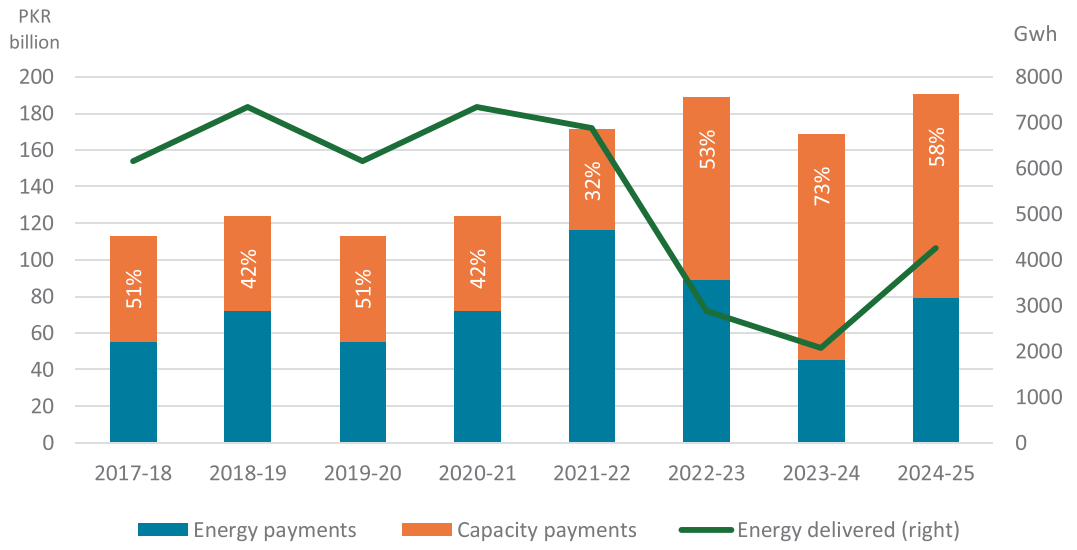
87 "HUBCO reaches 'negotiated settlement with govt for early termination of power agreements" (10 October 2024) Business Recorder. https://www.brecorder.com/news/40326440

88 "Sahiwal power station. Ownership Tree" Global Energy Monitor Wiki. https://www.gem.wiki/Sahiwal_power_station#Ownership_Tree

89 Ibid.

Sahiwal IPP payments and energy delivered

Figure 7



Total payments received by Sahiwal are up by 69% on eight years ago, with capacity payments accounting for more than half of payments over the last three years. Between 2021-22 and 2023-24, total energy delivered to the CPPA-G declined by 70%, but capacity payments increased by 123%, to PKR 123 billion, that year capacity payments made up 73% of power payments. Sahiwal burns imported bituminous coal, largely imported from Indonesia and South Africa,[90] but a significant increase in the coal price has resulted in a 73 percent decline in energy delivered by Sahiwal in the last three years alone. This resulted in a stunning 382 percent increase in the real price of energy in the last four years. As global energy costs again surge, there are concerns that we could the pattern of recent years repeated.

A number of news reports about Sahiwal also highlight issues with cost-plus energy payments in PPAs. Concerns have been raised, for example, around fuel overpayment – NEPRA records suggest that between June and December 2022, the Sahiwal power project had been purchasing coal for Rs74,000 per tonne, however at the same time public listed companies in the cement and textile industries were procuring coal for less than Rs45,000 per tonne.[91] At public hearings in 2023 it was similarly revealed that Sahiwal had procured significant quantities of coal when prices were high, and had been importing coal that was below specification.[92] We make no specific allegation against Sahiwal IPP in this regard, but the two-part tariff system of cost-plus energy payments and capacity payments does appear to create incentives for firms to overstate fuel costs, cut corners on quality, encouraging deliberate cost-inflation, misreporting and even potential corruption.

90 Coal is imported via the Huaneng Fuyun Port & Shipping (PVT) Ltd. MW 3 & 4 Coal Terminal

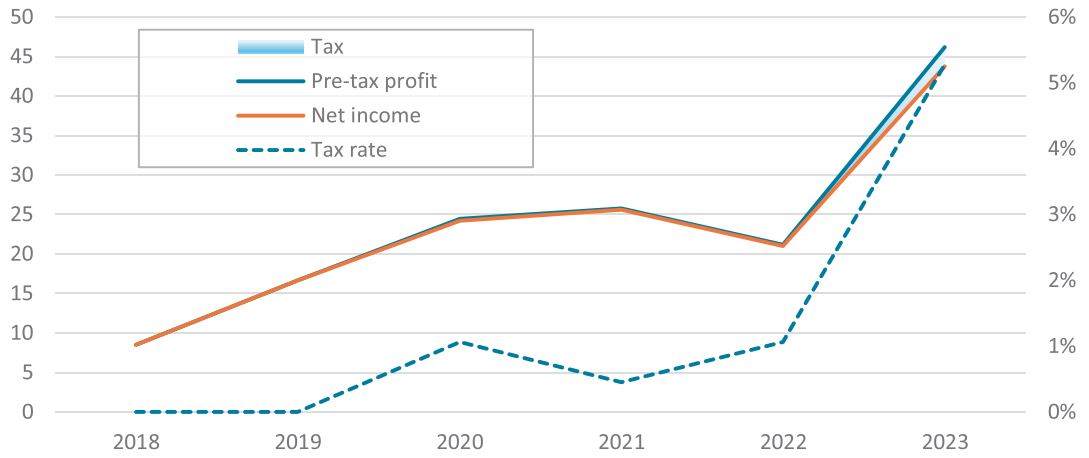
91 Khaleeq Kiani "Questions arise over coal imports for power plants" (13 May 2024) Dawn. https://www.dawn.com/news/1833193

92 Zafar Bhutta "Plants accused of overcharging for low-quality coal" (22 September 2023) Tribune. https://tribune.com.pk/story/2437101/plants-accused-of-overcharging-for-low-quality-coal

Sahiwal itself does not publish annual reports or financial statements, but some limited financial data has been available through the reports of the Pakistan Credit Ratings Agency.[93] As with Hub Power, enormous profit increases, with net income rising 445 percent – from PKR 8.5 billion to PKR 43.7 billion - in the six years to December 2023. With Sahiwal still within its statutory tax holiday period, the company incurred virtually no tax expenses: nothing in 2018 and 2019, around 1 percent for the next three years before reaching 5 percent in 2023. In July 2024, Sahiwal's operating company Huaneng Shandong (Pakistan) Energy (Pvt) Limited received an AA+ rating from the PACRA, however in July 2025 PACRA notified management of its decision to discontinue ratings (no explanation is given).[94]

Sahiwal IPP profit and tax (PKR bn)

Figure 8



3.3 Port Qasim

Situated near Karachi, the Port Qasim EPC power station is the second-largest single-plant recipient of payments from the CPPA-G system over the last eight years, receiving more than a trillion PKR. It was the third-largest recipient of capacity payments over this period (PKR 605 billion) and fifth-largest recipient of energy payments (PKR 445 billion). From 2020-21 to 2023-24, the amount of electricity delivered to the grid by Port Qasim declined by 91%, while capacity payments increased by 92% to PKR 104 billion. This resulted in a more than 1000% increase in the average real cost of electricity over that four year period, with Port Qasim EPC's average real energy cost reaching PKR 149 million per GWh in 2023-24, roughly 50 times higher than WAPDA's average real cost that year. As with Sahiwal, today's rising energy costs may again result in rising capacity payments and declining energy generation, pushing up costs.

93 See e.g. "Rating report: Huaneng Shandong Ruyi (Pakistan) Energy Pvt Ltd" (July 2024) Pakistan Credit Ratings Agency Limited. https://www.pacra.com/summary_report/RR_2426_13294_19-Jul-24.pdf

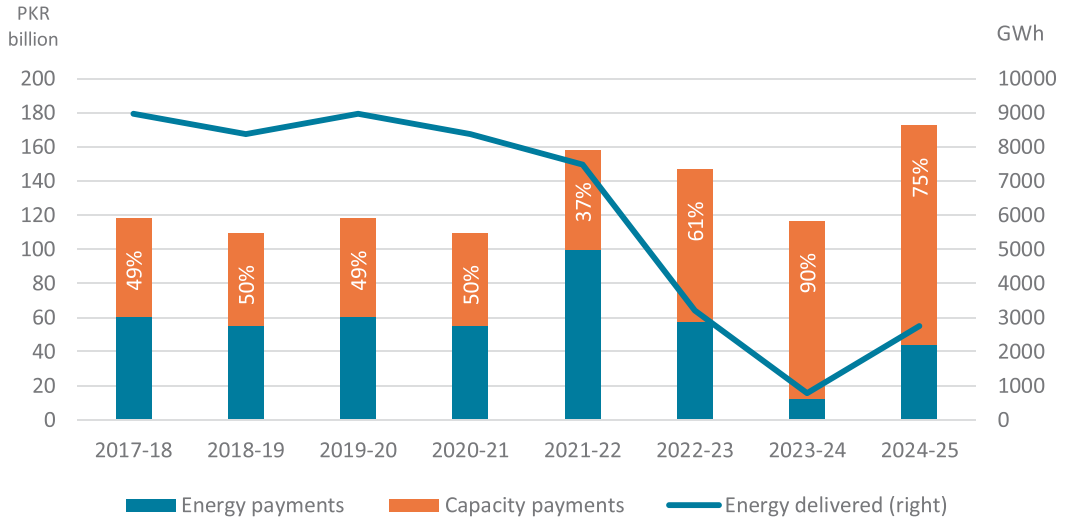
94 "PACRA Withdraws the Entity Ratings of Huaneng Shandong Ruyi (Pakistan) Energy (Pvt) Limited" (18 July 2025) PACRA. https://www.pacra.com/finalPr/MTQ2NjA=

Port Qasim is a 1320MW coal-fired power station made up of two 660 MW units that began operations in November 2017 and April 2018 respectively. Its operating company – Port Qasim Electric Power Company Pvt Ltd is 51% owned by state-owned Power China, and 49% by Al Mirqab Capital Co,[95] an umbrella investment group for the ruling Al Thani ruling dynasty of Qatar.

Port Qasim EPC

NEPRA State of Industry reports

Figure 9



No financial statements are available for Port Qasim EPC, but news reports suggest it has struggled to sustain cashflow due to payment arrears under its PPA. In May 2023 CEO Guo Guangling served a formal notice of payment default on the CPPA-G, noting the purchaser owed the company PKR 77.3 billion and that "as (an) imported coal power project, [Port Qasim] requires a constant and large amount of cash flow to purchase coal and clear overdue amounts with coal suppliers for sustainable operations".[96]

This reflects the circular debt problem, where payment delays cascade through the system. By late 2025, this situation had deteriorated significantly. In October 2025, a letter to the government warned that the company may soon be forced to suspend its operations, citing a "critical liquidity crunch", with outstanding payments reaching Rs 75.5 billion and payment delays extending beyond six months.[97] This was followed in November with the announcement that 49% shareholder the Al Thani Group had served a "Notice to Divest" to the Pakistan government.[98] For now the plant remains

95 "Port Qasim EPC power station" (last edited on 26 November 2025) Global Energy Monitor Wiki. https://www.gem.wiki/Port_Qasim_EPC_power_station

96 Kazim Alam "Chinese IPP serves notice of payment default on CPPA" (31 May 2023) Dawn. https://www.dawn.com/news/1757015

97 "PQEPC Warns of Possible Shutdown Over Rs75 Billion in Unpaid Dues" (14 October 2025) Energy Update Magazine. https://www.energyupdate.com.pk/2025/10/14/pqepc-warns-of-possible-shutdown-over-rs75-billion-in-unpaid-dues

98 "Qatar's Al-Thani Group to divest its stake in Port Qasim power project amid payment delays: report" (5 November 2025) Profit by Pakistan Today. https://profit.pakistantoday.com.pk/2025/11/05/qatars-al-thani-group-to-divest-its-stake-in-port-qasim-power-project-amid-payment-delays-report

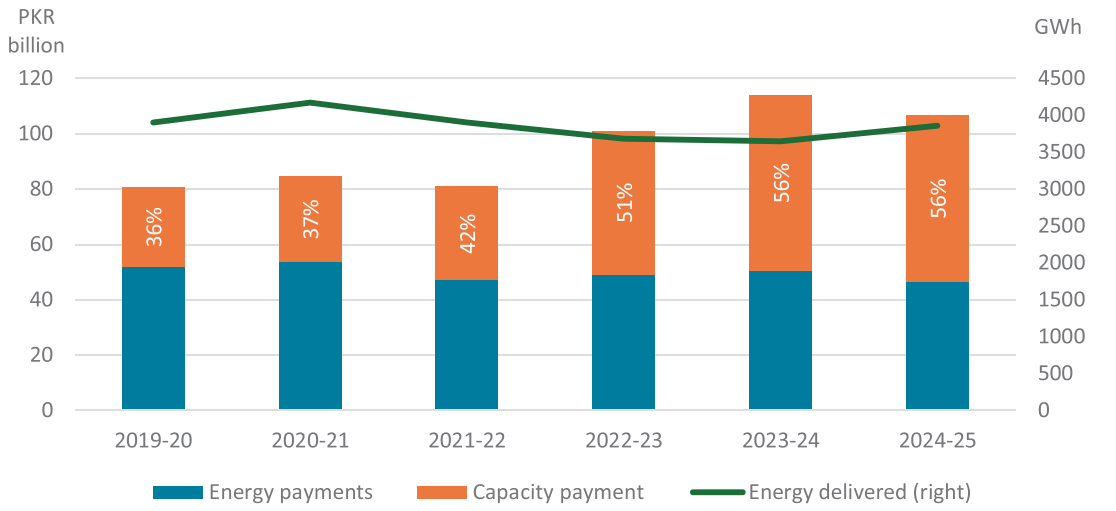
operational and the government is hopeful that it can use part of the PKR 1.2 trillion loan facility to address the issue. However the crisis at Port Qasim serves as a stark illustration of the breakdown between theoretical PPA 'guarantees' and the state's actual ability to pay. Despite the promising dollar-indexed returns, the project remains technically insolvent because the cost of imported coal and debt servicing exceed cash available in the circular debt-ridden system. The threat of divestment could have further implications if other investors follow suit.

3.4 Engro Powergen

Engro Powergen – a subsidiary of Pakistani conglomerate Engro – owned majority shareholdings in two power plants in Pakistan: the 660MW Thar Engro coal project and 217MW Engro Powergen Qadirpur, which is powered by high sulfur permeate gas from the Qadirpur gas field.[99] The deployment of local and/or waste power sources meant that these assets were both relatively cheap producers of electricity. In mid-2024 Engro announced it was selling its 50.1 percent interest in the Thar Project to a local consortium.[100] Engro still holds a 69 percent shareholding in the Qadirpur project, in which the International Finance Corporation (the private equity arm of the World Bank) is also a major investor.

Thar Engro payments and energy delivered

Figure 10



The 660MW Thar Engro coal project began operation in July 2019, powered by the vast lignite coal reserve in Sindh Province's Thar desert. While lignite combustion produces very high carbon emissions, it has not experienced the same dramatic price increases as imported coal. It is operated by **Engro PowerGen Thar (Pvt.) Limited**, a company that was at the time 50.1 percent owned by

99 "Engro Powergen Qadirpur" Engro Energy. https://www.engroenergy.com/engro-powergen-qadirpur-limited/

100 "Engro's strategic asset diverstiture in thermal energy sector gets CCP's approval" (27 July 2024) Profit. https://profit.pakistantoday.com.pk/2024/07/27/engros-strategic-asset-divestiture-in-thermal-energy-sector-gets-ccps-approval/

Engro Group, 35% owned by state-owned China Machinery Engineering Corporation, 9.5% by Pakistani Habib Bank Limited and 5.4 % by Liberty Mills Limited.[101]

The use of locally-extracted fuel appears to have insulated Thar Engro from the worst price increases, atlhough high imported coal prices also appeared to have impacted prices for local Thar coal as well. From 2021-22 to 2023-24 total payments to Thar Engro increased by 41 percent, driven by an 88% increase in capacity payments over those two years. Energy delivered over this period decreased by 7 percent, pushing up the average price by 56 percent over this period. While substantially smaller (with annual generation of less than 1000 GWh), the Qadipur gas permeate project – which also uses domestically-sourced fuel – shows an even lower price increase over the period of just 33 percent.

Figure 11

Engro Powergen Thar profit

PACRA reports

Despite the relatively lower increases in payments, PACRA financial statements nonetheless show a 357 percent increase in net income in the five years from 2018-2019 to 2022-23.[102] This is in spite of a 423% increase in finance costs over those five years.[103]

Engro Powergen appears to benefit from the generous tax incentives provided to the electricity sector. Over this period just PKR 2.5 billion in tax expense has been incurred off a total pre-tax profits of PKR 80.8 billion, an average effective tax rate of 3% over this period.

101 Hashim Yazdani "PACRA Upgrades Entity Ratings of Engro PowerGen Thar (Pvt.) Limited" (13 September 2024) Pakistan Credit Rating Agency Limited. https://www.pacra.com/finalPr/MTM1Mzc

102 "Engro PowerGen Thar (Pvt.) Limited" (13 September 2024) The Pakistan Credit Rating Agency Limited. https://www.pacra.com/summary_report/RR_1244_13537_13-Sep-24.pdf

103 Ibid.

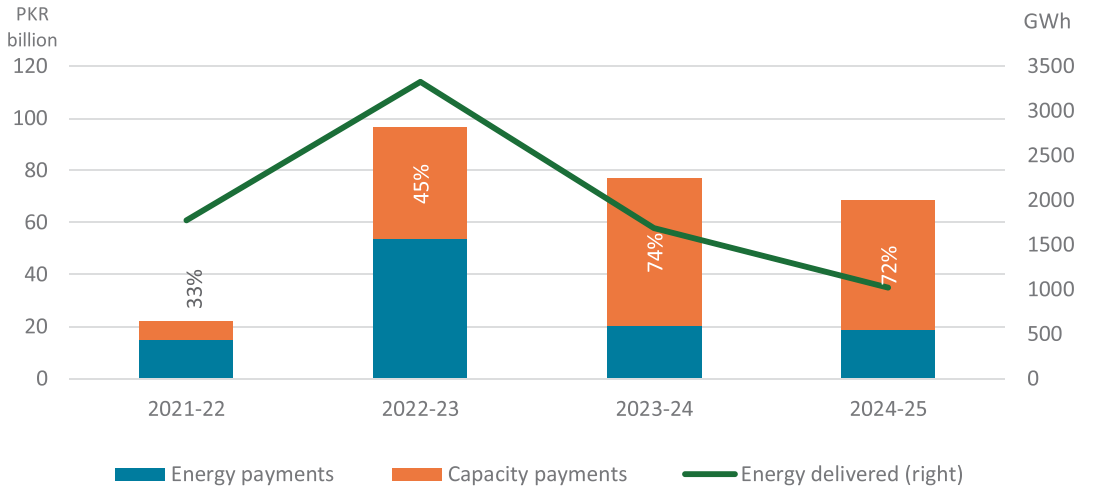
3.5 Lucky Electric Power Company

Lucky Electric Power Company is a relatively new company that began operations in 2022. Like Engro Powergen, the 660 MW coal power plant burns local Thar coal and therefore has similarly been insulated from the worst prices increases. Lucky Electric is a wholly owned subsidiary of Lucky Cement,[104] one of the largest cement producers in the country, that is listed on the Pakistan Stock Exchange. Despite its relative newness, PACRA financial statements still show large increases in profit in the last three years.[105]

Figure 12

Lucky Electric payments and energy

NEPRA State of Industry reports



Lucky Electric has four years worth of NEPRA data. By its second year of operation, energy delivered peaks with capacity payments at 45% of payments. Over the next two years the amount of energy delivered to the grid declined by 69%, with capacity payments growing to more than 70% in those years. Over those two years the average electricity price climbs 435% to PKR 67 per GWh, more than twelve times the average WAPDA price in the same year.

PACRA financial statements show rapid profit growth and minimal levels of taxation.[106] From 2021-22 to 2023-24 profits increased by 2426% (although this increase is from a very low starting point when the plant opened). While we noted earlier that new tax exemptions are no longer being granted, Lucky Electric received an exemption at the time the project's PPA was negotiated. As a result of this,

104 "Port Qasim Lucky power station" (last edited 27 November 2025) Global Energy Monitor Wiki. https://www.gem.wiki/Port_Qasim_Lucky_power_station

105 "Lucky Electric Power Company Limited – PPSTS-20 – PKR 5bln – Aug24" (20 September 2024) PACRA. https://www.pacra.com/summary_report/RR_2775_13571_20-Sep-24.pdf

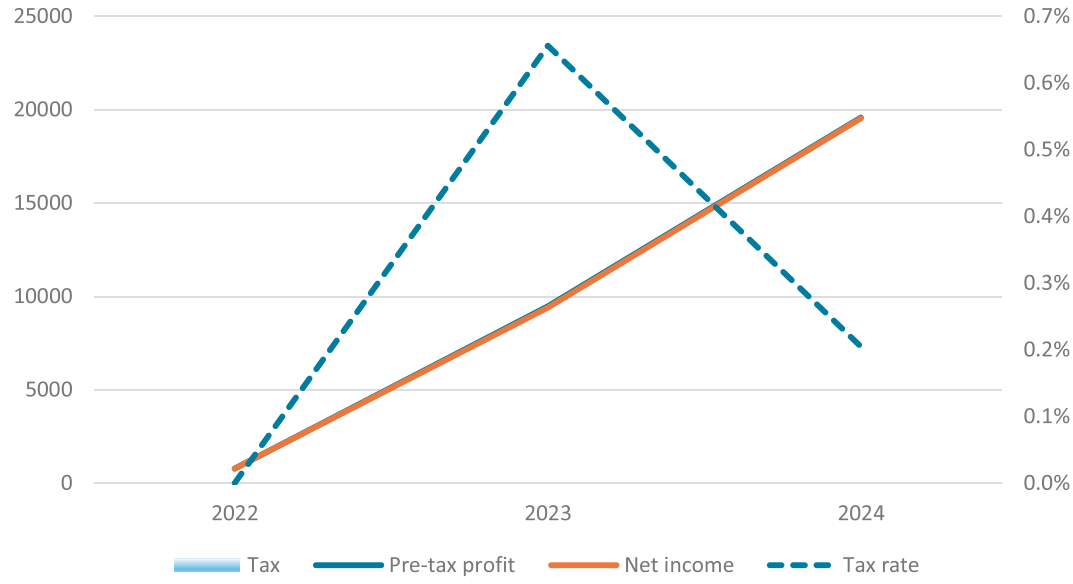
106 Ibid.

Lucky Electric's rate of taxation is below 1 percent throughout this period, despite reaching a net income margin of 21 percent in 2024.[107]

Figure 13

Lucky Electric profit and tax

PACRA reports



107 Ibid.

Conclusion

The foregoing analysis shows that while PPAs negotiated by the Pakistan government have failed to end load-shedding across the country, they have delivered enormous riches to shareholders that have managed to effectively operate the system. At the same time, these arrangements have saddled the public with rising tariffs and deepening circular debt, even as actual electricity generation from private plants has stagnated or declined.

The public system still forms the cornerstone of Pakistan's national economic development providing close to two-thirds of total electricity at far lower real cost. The latest 2025 data further confirm that while public generation continues to carry the system, private thermal plants remain heavily underutilised, despite enormous capacity payments. WAPDA remains the real workhorse here, generating roughly a quarter of electricity for a fraction of the real cost of many of the large private generators. Concluding that Pakistan needs to further privatise additional sectors of the electricity system to solve the problems that privatisation has either created or failed to address simply does not compute.

Yesterday's privatisations did not take place in a vacuum, and pressure from international financial institutions continue to shape the policy agenda of countries like Pakistan. There remains a notable lack of accountability from the World Bank and IMF, whose policy blueprints in the 1990s and 2000s popularised the capacity-payment model across the Global South.[108] From Manila to Accra to Islamabad, this 'de-risking' for private capital has effectively 're-risked' entire national economies, creating the capacity payment and circular debt crises these institutions now struggle to manage. These policies have lumped growing financial burdens onto countries and their populations, but have not brought energy security; instead consumers appear to be finding greater security by leaving the grid altogether.

There has been some impressive progress in PPA renegotiation. By January 2026 the government had successfully concluded renegotiations with 29 independent power producers (IPPs) and state-owned plants, including the early termination of six major contracts like Hub Power and the conversion of others to a take-and-pay[109] basis.[110] Most of these savings are from renegotiations with state-owned producers, indicating that the primary fiscal relief has been achieved through government balance sheet adjustments (and could therefore have been undertaken sooner).

108 One notable exception to this is a 2019 World Bank report noting that "[f]or many countries, the model simply did not fit the economic preconditions of their power sector; for many others, the approach encountered political challenges in implementation." Vivien Foster and Ansul Rana "Rethinking Power Sector Reform in the Developing World" (2019) World Bank Group, vii. https://www.esmap.org//sites/default/files/RPSR_English%20_Overview_Final.pdf

109 Unlike take-or-pay contracts, take-and-pay contracts requires the buyer to receive and pay for a minimum volume of energy, often with penalties for receiving less than a minimum volume. This shifts some risk to the seller but still provides a revenue floor.

110 "Revised IPP Contracts to Save Rs 3.5 Trillion Over 3-20 Year: Power Division" (27 March 2025) Energy Update Magazine. https://www.energyupdate.com.pk/2025/03/27/revised-ipp-contracts-to-save-rs3-5-trillion-over-3-20-years-power-division/

Beyond contract renegotiations, a fundamental shift is underway as the state dismantles its role as the sole buyer of electricity to a more market-oriented system. In 2025 a new independent market operator (the Independent System and Market Operator) was launched, which has assumed the market operator license from the CPPA-G, which still holds a role in managing the remaining take-or-pay contracts until expiry. By early 2026 the introduction of competitive auctions has created a marketplace where large industrial users can buy power directly from private generators. This should progressively shift risk away from the public and onto the private market, however this track is only available for large consumers, not households or small businesses. While they can escape the market through rooftop solar, that pathway requires some existing financial means and is likely out of reach for low-income households.

Still, it's notable that the majority of generators remain in the legacy single-buyer system for now, and international trade and investment agreements rules may continue to constrain flexibility for Pakistan. Firstly, there have been no negotiations relating to CPEC projects, which account for some of the largest capacity payments, price hikes and runaway profits in the system. While this may be indicative of the sensitive relationship that exists between China and Pakistan, the relationship must serve both parties. Chinese state-owned companies should not generate windfall profits from the misery of the Pakistani people, regardless of what was negotiated under PPAs.

Foreign investors likely have channels available to resist possible negotiations, including through the use of investor-state dispute settlement provisions under investment agreements. On 8 December 2024 the government of Pakistan received notice from the owners of the Halmore Power Company that a claim was being initiated under bilateral investment treaty between Pakistan and the United Kingdom, arguing that the company had been forced to accept a reduced rate of return[111] (PACRA financial statements suggest the company enjoyed a relatively robust 41.6 percent profit increase in 2022 to PKR 7.14 billion, on which it incurred virtually no tax expense[112]). The newly-initiated international arbitration over the stalled sale of K-Electric further illustrates the long-term legal and fiscal risks create by private ownership of essential services.

The excessive profitability of these projects means investors will likely continue to challenge renegotiations. While the 2009 China-Pakistan bilateral investment treaty billions in Chinese investment in Pakistan solidifies those constraints. formal legal constraints, the Pakistan's relationship with the US and US-led multilateral financial institutions bring similar pitfalls. The World Bank's promotion of PPAs seeded this crisis. The IFC took positions in IPPs and invested in privatised K-Electric. Today, with IMF disbursements linked to the sale of the distribution sector and other state-owned enterprises, privatisation now enjoys full-throated political support.

This is being supercharged Trump's America, even before Islamabad became the go-to host country for US-Iranian peace negotiations. In July 2025 President Trump and Prime Minister Sharif concluded an historic trade deal incentivising American firms to develop Pakistan's unproven 'massive' oil reserves in Balochistan, rolling back threatened 29% tariffs on Pakistani exports to 19% (lower than the 25% rate levied on regional rivals India).[113] This fossil-focused partnership is accompanied by the proposed establishment of a "strategic bitcoin reserve" initiative, modelled after Trump's own

111 "GoP Receives Notice from Halmore Power Company Regarding 'Forced' Negotiated Settlement" (8 December 2024) Newzshewz. https://newzshewz.com/gop-receives-notice-from-halmore-power-company-regarding-forced-negotiated-settlement/

112 https://www.pacra.com/summary_report/RR_1293_11356_22-Mar-23.pdf

113 "Trump says US and Pakistan have concluded a trade deal" (31 July 2025) The Straits Times. https://www.straitstimes.com/world/united-states/trump-says-us-and-pakistan-have-concluded-a-trade-deal

domestic crypto policy, and allocate 2,000MW of electricity towards cryptocurrency mining.[114] In January 2026 Pakistan signed an MOU with Trump family crypto venture "World Liberty Financial" proposing the use of its USD1 stablecoin in international transactions.[115] Crypto mining is energy-intensive, has negligible job creation effects, and is controlled almost entirely by unregulated private interests. Later reporting revealed that 49% of World Liberty had been acquired by an Emirati-backed investment firm in exchange for access to tightly-guarded AI chips.[116]

These developments take on an even greater significant following US-Israeli attacks on Iran and the closure of the Strait of Hormuz, triggering a regional conflict and a global energy crisis. As global fuel prices rise, Pakistan and other countries across the Global South face the risk of another capacity payment-induced energy cost blowout, one that could redouble external debt pressures that have severely constrained development in recent decades. Dollar-indexed PPAs ensure that every global energy shock becomes a domestic fiscal emergency, further driving countries into the arms of Washington-based financial institutions, whose ideological reforms exacerbate the crisis. If left unreformed, higher fuel costs could trigger automatic surges in capacity payments, deeper circular debt, and the further substitution of public budgets away from health, education, and social protection toward servicing privatesector contracts.

Against this backdrop, it is unions and community groups that will play the most important role in resisting the privatisation programme across the economy, and in particular in the electricity distribution sector. Low-income workers are already paying the costs of the capacity payment model, the circular debt trap, and the emerging utility death spiral, all of which is driving more expensive power. As Pakistan moves towards a decentralized and renewable energy system, public control over the distribution and storage of energy will be crucial. Unions and community organisations are uniquely positioned to demand transparent reform, protect public ownership and ensure the benefits of the energy transition flow to the households and businesses that need it the most. We hope this report will help strengthen the evidence base from which those campaigns will be built.

114 Humza Jilani "Pakistan pitches Nobel, crypto and rare earth metals to woo Donald Trump" (3 July 2025) Financial Times. https://www.ft.com/content/38314737-bc69-4e0a-b88c-20e779b6fd86

115 "USD1 is a digital token designed to maintain a one-to-one value with the US dollar issued by World Liberty Financial, a crypto firm linked to the Trump family's business network." Waseem Abbasi "Pakistan signs pacts with Trump-linked crypto firms to explore digital payments" (14 January 2026) Arab News. https://www.arabnews.com/node/2629279/pakistan

116 Sam Kessler, Rebecca Ballhaus, Eliot Brown and Angus Berwick "'Spy Sheik' Bought Secret Stake in Trump Company" (31 January 2026) The Wall Street Journal. https://www.wsj.com/politics/policy/spy-sheikh-secret-stake-trump-crypto-tahnoon-ea4d97e8?mod=hp_lead_pos5

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Paying more for less

The report argues that Pakistan's push to privatise electricity distribution companies risks repeating failures seen in the generation sector. Earlier privatization, driven by IMF-linked reforms, led to costly tariff structures and incentives favoring private investors. This resulted in excess generation capacity, rising "circular debt," and massive capacity payments—over 2 trillion rupees—despite stagnant electricity output. Private firms, especially coal-based producers, gained windfall profits while consumers faced higher costs. Case studies show profits rising even as output declined. The report concludes that privatisation has worsened inefficiencies and warns that extending it to distribution could harm service quality and affordability.

Further information on this topic can be found here:
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Friedrich Ebert Stiftung