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Optimizing Pakistan's Economy by Renegotiating Power Purchase Agreements

Targeting underutilized, debt-free fossil fuel plants is necessary, but negotiations should be more transparent for mutual agreement

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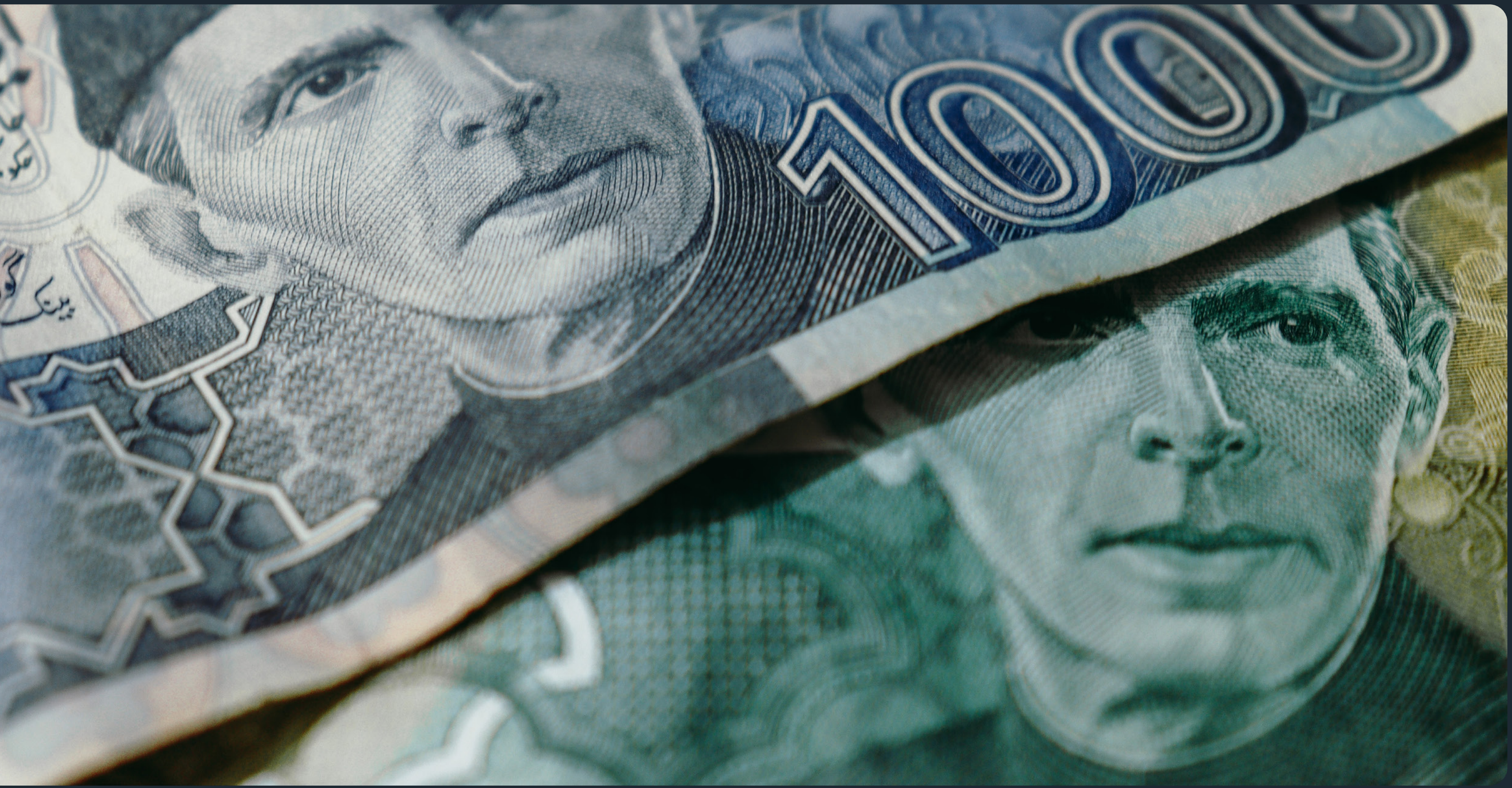

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Key Findings

Capacity payments in Pakistan reached PKR2.1 trillion in 2024, exacerbated by reduced industrial output and shrinking grid demand. Under the International Monetary Fund's directive, the government was forced to take decisive action to rectify the situation.

Power purchase agreements (PPAs) with five Independent Power Producers (IPPs) in Pakistan were terminated as a first step. Two of the five IPPs took haircut deals, accepting a discount of up to PKR20 billion. 18 other IPPs face possible conversion to take-and-pay contracts, whereby the state-owned off-taker will only be liable to pay for energy consumed by the grid, eliminating capacity charges.

While the Pakistani government's targeting of middle-aged, underutilized fossil fuel-based plants with no debt obligations is the right approach, the negotiation process should be more transparent for mutually acceptable outcomes.

This process could benefit both parties, with IPPs quickly recovering unpaid dues and the government avoiding paying for unrequired idle capacity.

Executive Summary

Developing countries in Asia and Africa, riddled with excess capacity payments and a surplus of generation capacity, are using contract renegotiation to lower their economic burden and conserve the foreign exchange. In Pakistan, Independent Power Producers (IPPs) have allegedly made excessive profits by under-reporting efficiency gains and over-invoicing, thus necessitating complex power purchase agreement (PPA) renegotiations. Contracts with five IPPs have already been terminated, while 18 others face a possible conversion to a take-and-pay basis.

Renegotiations require both parties to offer concessions to arrive at a deal. For the five IPPs with terminated contracts, two publicly listed companies may have waived some receivables while taking the government's offered settlement. Lalpir Power Plant, a 362 megawatts (MW) furnace oil-based plant located in Muzaffargarh, took a haircut of PKR7 billion. HubCo's 1292MW furnace oil-based power plant was offered PKR36.5 billion in compensation, almost PKR20 billion less than the total company valuation as of June 2024.

Renegotiation of concession agreements is not an unusual practice in the power sector, especially under destabilizing economic conditions such as macroeconomic shocks. Ghana, like Pakistan, has struggled with energy sector reforms prompted by rising power sector debt and unpaid dues. The country recently underwent a similar situation, successfully renegotiating contracts with five IPPs, including debt structuring and conversion to a take-and-pay system.

The government in Pakistan has attempted PPA renegotiations in 1998, 2012, 2020, and now in 2024. IPPs allege that repeated contract renegotiations and coercive tactics will hurt investor confidence and future expansion opportunities in the power sector.

An examination of the PPA terms reveals that the incentives offered to IPPs have been overly generous with backstopped payment guarantees, dollar indexation, and high return on equity allowances, contributing to Pakistan's ever-rising power sector circular debt.

Considering that the IPPs under review have paid off their debts and have earned reasonable returns on equity, contract termination or conversion to a take-and-pay basis is a reasonable proposition given Pakistan's persistent economic struggles and foreign exchange shortage.

While renegotiation could allow the government to save scarce economic resources, the IPPs may also have a chance at quick compensation for unpaid dues or the ability to sell power to secondary markets once Competitive Trading Bilateral Contract Market (CTBCM) reforms are operationalized. However, the negotiation process should be commercial and transparent to ensure optimal outcomes.

Background

In a bid to save the country's foreign exchange and conserve scarce economic resources, Pakistan recently terminated the PPAs of five IPPs, claiming savings worth PKR411 billion.[1, 2]

This move comes amid increasing pressure from the International Monetary Fund (IMF) to enact cost-side reforms as part of the country's US$3 billion Stand-by Agreement.[3] Consequently, the government has undertaken extensive power sector reforms including suspending gas supply to captive power plants, fast-tracking the CTBCM[4], and renegotiating contracts with IPPs. These steps aim to curb the growth of circular debt in the power sector and reduce the burden of capacity payments on the government and consumers.

After months of speculation, five IPPs had their PPAs terminated prematurely in exchange for a lump sum compensation for foregone capacity payments and receivables owed by the government. It is expected that 18 other IPPs will similarly have their PPAs converted from take-or-pay to a take-and-pay basis.[5] Negotiations are already underway and are expected to conclude in a few weeks.[6]

In Pakistan, power generators are paid a two-part tariff pre-determined by the National Electric Power Regulatory Authority (NEPRA). The tariff consists of a capacity price payment, which includes fixed costs such as debt servicing, return on equity, fixed operation and maintenance (O&M) costs, and an energy purchase price, which includes pass-through charges such as fuel costs and variable O&M.

A take-or-pay contract requires the payment of the capacity charge, regardless of the actual level of power offtake, while in a take-and-pay contract, the power purchaser is obligated to pay only for the power consumed. Take-or-pay clauses are a regular feature of PPAs globally to insulate project developers against any offtake risk and ensure debt repayment. However, such provisions have become problematic for developing economies across Asia and Africa, where dollar-indexed returns and a weak currency have led to ballooning capacity payments[7] and burgeoning power sector debt.

Pakistan's capacity payments grew to a staggering PKR2.1 trillion in the fiscal year (FY) 2024, with a 33% projected increase for FY2025.[8] Since capacity payments constitute 65% of the national average power purchase price[9], an increase directly impacts retail electricity tariffs.

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1 Business Recorder. Govt approves termination of existing Power Purchase Agreement with five IPPs. 10 October 2024.
2 Dawn. Govt ends contracts with five IPPs to save Rs411bn. 11 October 2024.
3 Business Recorder. IMF Executive Board approves final review of SBA, allows disbursement of $1.1bn for Pakistan. 30 April 2024.
4 Competitive Trading Bilateral Contract Markets (CTBCM) are market-based reforms intended to liberalize the power sector. As an initial step the CTBCM will allow bulk power consumers (>1 megawatts) to directly purchase electricity from power suppliers.
5 Business Recorder. Pay-mode conversion: Govt summoning 18 IPPs next week. 19 October 2024.
6 Profit. Govt nears deal with 18 IPPs to shift to 'take and pay' model: report. 11 November 2024.
7 Profit. Pakistan's capacity repayments hit Rs6 trillion in last five years. 29 July 2024.
8 The News. Nepra hearing: IPPs capacity payments projected to rise by 33pc to Rs2.8tr in next fiscal. 24 May 2024.
9 Arab News. Pakistan regulator increases power tariff by 20 percent amid new bailout talks with IMF. 15 June 2024.

High electricity tariffs and an increasing adoption of distributed/rooftop solar photovoltaic (PV) technology across the country[10] led to reduced industrial output and shrinking industrial and residential consumption from the grid.

The burden of capacity payments is expected to grow further unless the government succeeds in renegotiating contracts with IPPs.

Haircuts and Discounted Deals

Contract reviews and renegotiations require both parties to compromise. In Pakistan, the IPP facing contract termination would take a haircut on its project value while the government would clear the IPP's receivables.

IEEFA's analysis of the five IPPs with terminated contracts reveals that two publicly listed companies may have waived some receivables while taking the government's offered settlement. Lalpir Power Plant, a 362MW furnace oil-based plant located in Muzaffargarh, had net receivables worth PKR14.85 billion and short-term liabilities worth PKR6.55 billion at the time of termination. According to JS Bank data, the power plant would receive a cash settlement of PKR12.8 billion, effectively taking a haircut of PKR7 billion.

HubCo's 1292MW furnace oil-based power plant, Pakistan's first and largest IPP, was offered PKR36.5 billion in compensation, almost PKR20 billion less than the total valuation, as at the time of contract termination, its net receivables and debt liabilities exceeded PKR56 billion.

[10] Renewables First. The Great Solar Rush in Pakistan. 2024.

Figure 1: Receivables and Liabilities of IPPs Facing Contract Termination as of June 2024

Power Plants		Lal Pir	HubCo Base Plant	Roush Power	Atlas Power	Saba Power
Operational Parameters						
Capacity	**MW**	362	1292	450	214	134
Fuel Source		RFO	RFO	RLNG	RFO	RFO
Power Policy		1994	n/a	1994	2002	1994
COD		1997	1997	1999	2009	1999
Age	**Years**	27	27	25	15	25
Remaining Life	**Years**	3	2	5	9	5
Capacity Factor (2022-2023)	**(%)**	12.97	1.94	5.20	27.86	14.54
Financials						
Receivables	**PKR (Billion)**	14.85	62.92			
Payables	**PKR (Billion)**	1.57	38.48			
Net Receivables	**PKR (Billion)**	13.28	24.44			
Cash Settlement from Govt.	**PKR (Billion)**	**12.80**	**36.50**	**15.50**	**6.00**	**1.00**
Short-term Borrowing + Current Maturity of Long-term Borrowings	**PKR (Billion)**	6.55	31.62			
Long Term Borrowings	**PKR (Billion)**	0.00	9.74			
Cash Settlement Excluding Borrowings	**PKR (Billion)**	6.25	-4.90			
	PKR/Share	16.50	-3.70			
Haircut PKR (Billion)		7.03	19.56			

Note: HubCo was the first private sector project in Pakistan, facilitated by international financing institutions and the World Bank. The project was initiated in 1990, so it preceded the formulation of the power generation policy in 1994 which encouraged private investment in the power sector. Rousch Power, Atlas Power, and Saba Power are not publicly listed companies, therefore, financial information could not be obtained for these companies.

Source: JS Bank; NEPRA State of the Industry Report 2023; Author Analysis.

For the 18 IPPs being considered for conversion to a take-and-pay contract, the government has proposed reducing capacity payments to 70-75% of the annual average fixed power generation costs over the last five years.[11]

Renegotiation details remain unclear, including whether returns would remain dollar-indexed or how the revised tariffs would be determined. A take-and-pay contract usually stipulates fixed offtake or dispatch. If the buyer (the government in this case) is unable to take the minimum contracted

[11] Profit. Govt proposes new financial model for IPPs to cut capacity payments. 02 November 2024.

quantity in each period, it would breach the contract and be liable to pay for the seller's incurred damages.[12]

To address this risk, the government proposes expediting the establishment of CTBCM reforms, allowing the power plants to sell power directly to clients through private markets.

Recurring Historical Patterns

The IPPs and their investors have criticized the allegedly unfair deals and coercive tactics used for contract termination. The German sponsors of Roush Power Plant, a 25 year old furnace oil-based IPP facing an imminent transfer to the Government of Pakistan on termination of a build-own-operate-transfer (BOOT) contract, expressed concern about the pressure tactics used to force the deal. It also highlighted that constant renegotiation over the years had hurt plant profitability.[13]

These renegotiations are based on a 2020 power sector report by Muhammad Ali, the current Special Assistant to the Prime Minister (SAPM) on Power, who also leads the renegotiation task force. The report stated that many IPPs had unduly profited over the years through over-invoicing, heat rate manipulation, and under-reporting of efficiency gains, earning substantial returns on their investments (50-70%) as opposed to the government-mandated rate of 12-15%, leading to excessive capacity payments and a buildup in circular debt.[14]

While NEPRA reports lower excess profits[15], the IPPs assert that these gains were only due to higher plant efficiency and that they had faced challenges because of unpaid dues and financial arrears.[16] Additionally, the government's repeated attempts at PPA renegotiation in 1998, 2012, 2020, and now in 2024, have severely eroded investor confidence and could result in decreasing foreign direct investment (FDI).[17]

When the first IPP policy was introduced in 1994, Pakistan had a power supply deficit and needed quick solutions to meet its growing demands. Attractive PPA terms such as guaranteed returns (up to 25%)[18] for 20 years, US dollar indexation, exemption from various taxes and customs duties, pass-through fuel costs, an appealing tariff ceiling, and government guarantees were offered, which allowed an influx of almost 3.5 gigawatts (GW) of capacity and FDI worth USD5 billion.

The policy's initial success quickly turned into a significant challenge for the government as it resulted in over-capacity. The government accused the IPPs of corruption and technical

[12] The Energy Year. Ghana's shift from take-or-pay to take-and-pay. 01 February 2022.
[13] Republic Policy. Germany Raises Concerns Over Pakistan's Energy Deals with Private Producers. 30 October 2024.
[14] Profit. Govt asked to recover Rs100bn from 'corrupt' IPPs. 11 April 2020.
[15] Senate of Pakistan. Special Report of the Standing Committee on Power on 'To Review the issues of high tariffs, capacity charges, heat rates and calculations of payback periods'. 2020.
[16] Dawn. New payment model for IPPs without 'profit bonanza'. 02 November 2024.
[17] Dawn. The IPP negotiations. 12 October 2024.
[18] The World Bank Group. Second Private Sector Energy Development Project, Project Implementation Report. 11 May 2001. Page 18.

manipulation, and by 1998, two-thirds of the contracted capacity had been issued notices of intent to terminate. After three years of discussions, most contracts were eventually forcibly renegotiated. The country's weak fiscal position, limited exports, shrinking energy demand, and mishandling of the renegotiation process led to new investment in the power sector shrinking for almost 10 years.

According to a World Bank document from 2005:
"Perceptions by the project sponsors of excessive coercion, harassment and heavy-handed legal and other actions initiated by the Government to renegotiate tariffs or cancel contracts contributed to Pakistan's fall from grace in the eyes of the international private sector community."[19]

The current situation resembles that of twenty years ago. The same renegotiation tactics are being used with IPPs. The country is slowly recovering from a two-year foreign exchange crisis. The grid is in surplus as consumer demand rapidly falls due to high energy prices.[20] Exports are stagnant, and investor confidence is low due to widespread macroeconomic instability.

Shared Responsibility for Economic Instability

IPPs in Pakistan have legally binding contracts with the government that permit inflated returns due to dollar indexation and take-or-pay provisions. Therefore, an increase in the generation cost due to currency depreciation cannot be labeled as malpractice. The regulator should have carried out effective due diligence highlighting any over-invoicing or under-reporting of fuel savings, with subsequent revisions to tariff agreements ensuring it would not happen again.

Simultaneously, while the government erred in allowing these provisions, PPA terms have been overly generous, resulting in lucrative returns and high profit margins over the long term. However, these incentives have not been gradually phased out. Instead, since 1994, power generation policies have offered the same incentives. For example, the 2015 power generation policy allowed a return on equity of up to 34% for coal-fired projects to crowd in investments into Pakistan's nascent coal sector.[21]

There has been an uncontrolled increase in electricity tariffs due to the rapidly evolving economics of the power sector and fuel price volatility because of prices linked to foreign currency indexation without a price cap. Contract termination for the five IPPs mentioned earlier was followed by tariff renegotiation for eight bagasse-based IPPs, which had been allowed to index locally produced bagasse prices to South African imported coal with adjustments for exchange rate fluctuations. This resulted in a 110% increase in the fuel cost component (FCC) for bagasse-based power from PKR5.98 per kilowatt hour (kWh) to PKR12.48 per kWh.[22]

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[19] The World Bank Group. Lessons from the Independent Private Power Experience in Pakistan. May 2005.
[20] The Express Tribune. Power demand slumps 17% in Aug. 20 September 2024.
[21] Elsevier. What drives Pakistan's coal-fired power plant construction boom? Understanding the China Pakistan Economic Corridor's energy portfolio. March 2022.
[22] Business Recorder. Govt inks revised deals with 8 bagasse-fired IPPs. 23 October 2024.

Therefore, renegotiation is reasonable, provided all parties reach a mutually acceptable agreement. For instance, Ghana has also been undergoing power sector reforms as it pays up to USD500 million in excess capacity payments annually. The government began renegotiating in 2019 and successfully mediated with five IPPs to restructure debt and convert to a take-and-pay basis.[23, 24] These IPPs included Cenpower which supplies 10% of Ghana's power, resulting in savings worth USD13.2 billion over the lifetime of the projects.[25, 26, 27] The government also secured a haircut of USD400 million by restructuring the financial arrears owed to these plants through overdue capacity payments.[28, 29] Kenya and South Africa have also renegotiated PPAs though with limited success.[30, 31] Kenya even recently embarked on a pilot project to test out the feasibility of PPA denomination in the local shilling instead of foreign currency indexation.[32]

Potential Benefits for the Government and IPPs

Many plants scheduled for premature PPA termination and conversion to take-and-pay contracts have had low capacity factors over the years. Some were in the middle of their PPAs or close to retirement, while others were undergoing a PPA extension and had paid off all long-term debts. Furthermore, these plants operate on furnace oil or imported liquified natural gas, resulting in a high generation cost and low dispatch.

One of the five furnace oil-based power plants whose PPAs were prematurely terminated had a capacity factor below 2% for three of the five years between 2018-2023 while receiving between PKR20-30 billion annually in capacity payments.[33] The plant also had unpaid dues by the Central Power Purchase Agency (CPPA-G) worth PKR65 billion as of March 2024, 86% of which were overdue.[34] Thus, for plants with just 2-5 years left on their PPAs, this could be an opportunity to get quick compensation for unpaid dues and a possible re-investment of funds into new ventures.

[23] Electricity Company of Ghana. Ghana Signs New Power Purchase Agreement. 12 April 2023.
[24] B&FT Online. Gov't reaches debt restructuring agreement with 5 IPPs. 02 July 2024.
[25] MyJoyOnline. IPPs have agreed to take a haircut after 6 years of negotiation – Amin Adam. 25 June 2024.
[26] ClassFMonline. We've renegotiated 6 'Mahama' PPAs to save Ghana US$13.2bn – Ofori-Atta. 26 July 2022.
[27] Asaase Radio. Government signs gas agreement with Cenpower to save US$3 billion. 11 October 2020.
[28] Ibid.
[29] 3 News. Renegotiation of 'expensive' IPP deals saved Ghana significant amount of money – Osei-Asare. 12 March 2024.
[30] Energy for Africa. South Africa proposes voluntary reduction of tariffs awarded in first three REIPPPP rounds. 02 October 2019.
[31] S&P Global Market Intelligence. Kenya revives power purchase agreements, aiding foreign investment efforts. 15 March 2023.
[32] Business Daily. Kenya drops push for shilling based power purchase deals.13 July 2023.
[33] NEPRA. State of the Industry Report 2023.
[34] The Pakistan Credit Rating Agency Limited. Rating Report for The Hub Power Company Limited. June 2024.

Figure 2: IPPs Under Consideration for Conversion to Take-and-pay PPAs

Plant Name	Capacity (MW)	Fuel Source	COD	Age (Years)	Remaining Life (Years)	Power Policy	Capacity Factor (CF) 2022-2023 (%)
Saif Power	229	RLNG	2010	14	14	2002	29.1
Halmore Power Generation	225	RLNG	2011	13	14	2002	21.56
Saphire Power	225	RLNG	2010	14	12	2002	24.35
Uch-II	404	Gas	2014	10	12	2002	88.17
Nishat Chunian Power	200	RFO	2010	14	11	2002	22.52
Nishat Power	200	RFO	2010	14	10	2002	31.4
Engro Power Gen Qadirpur	227	Gas	2010	14	10	2002	100
Hubco Narowal	220	RFO	2011	13	10	2002	25.09
Attock Gen Limited	165	RFO	2009	15	10	2002	35
Foundation Power (Daharki)	185	Gas	2011	13	10	2002	81.2
Orient Power	229	RLNG	2010	14	8	2002	32.46
Fauji Kabirwala Power	157	Gas	1999	25	5	1994	5.12
Pakgen Power	365	RFO	1998	26	3	1994	14.47
Laraib Energy	84	Hydel	2013	11	2	2002	47
Liberty Power Tech	200	RFO	2011	13	2	2002	31.69
Liberty Daharki	235	Gas	2001	23	2	1994	53.79
Uch 1	586	Gas	2000	24	-1	1994	82.03
Kohinoor Energy	131	RFO	1997	27	-5	1994	30.3

<33% 33%-67% >67%

Note: A negative remaining life indicates an extension in the power purchase agreement.

Source: JS Bank; NEPRA State of the Industry Report 2023; Author Analysis.

Many of these IPPs are owned by local conglomerates with diverse business portfolios. These could serve as secondary markets for power offtake once the government fully implements its wheeling regulations and operationalizes bilateral markets. The government has even offered this as a concession to the IPPs in its renegotiation package.[35]

For instance, the Hub Power Plant, is owned by the Hub Power Company, which has various business interests, including investments in coal, furnace oil, hydel, and coal-based power plants, as well as in the oil and gas sector. The company is also establishing electric vehicle (EV) and lithium-ion battery manufacturing facilities in collaboration with Chinese EV giant BYD.[36]

Similarly, the Lalpir Power Plant is owned by the Nishat Group, a Pakistani mega-conglomerate with interests in the textile, cement, hospitality, insurance, and financial sectors. There could be a post-retirement scenario where the compensation package offered by the government is used to

[35] The News. Govt plants, private IPPs to be treated alike. 25 September 2024.
[36] Arab News. Pakistan's largest independent power producer expands into lithium mining, battery manufacturing. 02 November 2024.

repurpose existing plant sites into off-grid renewable energy and storage assets to power other industries nearby.

The same could apply to the 18 IPPs facing conversion to take-and-pay contracts. Figure 2 above highlights the remaining contract life and plant capacity factor for each.[37] Power plants with low-capacity factors and 2-5 years remaining on their PPAs would not benefit the grid because of their low output. Therefore, immediate retirement could be an option unless they are critical for grid support.

Power plants with moderate to low capacity factors and a 10-15 year remaining contracted lifetime would have also earned reasonable investment returns. They could agree to take-and-pay agreements or early retirement. However, since many of these plants provide ancillary services such as frequency control and reactive power compensation, the latter would require investment in related devices and upgrading the grid infrastructure.

Any arrangement would be an achievement for the government in terms of saving foreign exchange and reducing energy costs. However, take-and-pay contracts usually stipulate minimum guaranteed dispatch, as in Ghana. Therefore, demand forecasting should be accurate.[38] Conversely, leniency could be observed in guaranteed dispatch for plants that have paid off all outstanding debts or gained significant returns on equity.

The government also loses the ability to demand liquidated damages for unavailable capacity and would be liable to pay the producer if it is unable to meet the guaranteed dispatch condition.[39] Consequently, a robust mechanism for auditing plant performance and availability should be developed to ensure that NEPRA and CPPA-G can check the performance of all thermal IPPs and verify invoices.

Another option could be introducing PPA price reviews to ensure electricity prices reflect evolving market trends. Additionally, compensation clauses could be included that establish an obligation on the buyer to pay any differential in price if a higher cost is agreed upon or for the seller to offset any overpaid dues by the buyer if a lower price is determined.

[37] Plant Capacity Factor is a measure of actual plant dispatch over the plant's theoretical annual output. A low capacity factor would mean underutilization of the plant.
[38] Electricity Company of Ghana. Ghana signs new Power Purchase Agreement. 12 April 2023.
[39] The Energy Year. Ghana's shift from take-or-pay to take-and-pay. 01 February 2022.

Conclusion

Renegotiating contractual agreements is not unusual in the private sector if precipitated by changing economic conditions, such as the significant macroeconomic shocks experienced by Pakistan. However, negotiations need to be commercial and transparent to ensure optimal outcomes.

The IPPs under review contribute a smaller share to the overall capacity payments than government-owned re-gasified liquefied natural gas plants or the China-Pakistan Economic Corridor (CPEC) plants under government-to-government (G2G) agreements.[40] Expanding the scope of renegotiations to these plants could provide additional economic advantages for the country.

Pakistan's continued emphasis on generation addition without consideration of the principle of least-cost expansion led to the entrenchment of unsustainable incentives, which are challenging to modify. Contract renegotiations and early terminations can deliver monetary benefits for the government in the short term. However, the inflexible PPA model should be revised in the long term, adopting a staggered approach for phasing out incentives. While competitive procurement may provide the final solution, transitioning to a fully liberalized market will take years. Until that happens, PPAs will likely govern a significant share of the power market. Robust auditing processes should be established, and future IPP solicitation should be through competitive bidding aligned with the country's socio-economic development and budgetary constraints to prevent recurrences of the current situation.

[40] The News. Factors behind hike in IPPs capacity payments to Rs2.142tr. 02 September 2024.

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