Insights for Change

Navigating Pakistan's Power Sector Crisis: Challenges, IMF Recommendations, and the Path to Sustainable Reform

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Introduction

Pakistan faces turbulent times as it grapples with a looming sovereign default brought on by maturing external debt payments and a shortage of foreign reserves. To avoid a potential sovereign default, Pakistan is seeking assistance from the International Monetary Fund (IMF). An important issue that concerns the IMF is the debt crisis in Pakistan's electricity sector for whose solution the IMF has made certain recommendations. This article takes a closer look at the challenges faced by Pakistan's electricity sector, the IMF's recommendations, the Government's response and a sustainable way forward.

Challenges Faced by the Power Sector

The cost of electricity is high in Pakistan. To run four 40-watt light bulbs and two 80-watt fans for thirty days, a household requires roughly 230 units of electricity. This costs roughly 5000 PKR in Pakistan, while in Bangladesh, the same amount of electricity costs only 3700 PKR. It is important to note that these figures do not include sales tax, which is also higher in Pakistan. Similar comparisons can be made for commercial and industrial connections, where the price of electricity in Pakistan is higher than in Bangladesh.

Despite the high cost to end-users, the cost of producing and supplying electricity in Pakistan is even higher for three reasons. First, a significant portion of electricity is generated using imported fuel, making it vulnerable to global oil price shocks and the Pakistani exchange rate. Second, a high percentage of electricity is lost, stolen, or not paid for. Third, a substantial component is due to capacity costs paid to producers for their capital investment, irrespective of how much electricity they produce[1].

Historically, the Pakistani government has subsidized electricity for industrial and residential consumers. These subsidies are often implemented through complex mechanisms, are frequently unbudgeted, and ultimately financed by debt. The continued provision of subsidies has inflated power sector debt to approximately 3% of GDP, an amount that is fiscally unsustainable.

IMF's Recommendations

For many years now, the IMF has recommended that electricity subsidies be cut and tariffs raised. This is also an issue for ongoing negotiations on the resumption of the IMF loan arranged in 2019. Besides the debt, there other reasons to remove electricity subsidies in Pakistan. The first involves the inability to prevent subsidy leakage among residential consumers. Subsidies are provided to low usage slabs on the assumption that the relevant households belong to low income brackets. But higher income (and high use) consumers can cheat by installing multiple meters. Additionally, in winter, when electricity consumption is low, even the wealthy may avail the subsidy.

Industry-focused subsidies may also be inefficient in achieving their intended goal. Typically, these subsidies are motivated by the pretext of improving exports. While it is true that firms find it difficult to remain competitive in the global market with a high cost of electricity, it is unclear whether energy subsidies are the best way to promote exports. Conventional economic arguments suggest that to promote a specific activity, the government should subsidize it directly rather than indirectly. For instance, the government could incentivize exports directly by offering income tax credits for every dollar of export, rather than arbitrarily subsidizing one of the inputs, in this case, electricity[2].

Government's Response

At the present difficult juncture, the government has opted to raise electricity prices and reduce subsidies. According to news sources, the government intends to increase prices by over thirty percent and has already authorized the removal of electricity subsidies for firms in the export sectors[3]. While these measures appear to be steps in the right direction, the way they are executed leaves room for improvement.

Removing subsidies immediately could lead to unintended consequences. For example, a sharp increase in residential electricity prices could prompt households to adjust their behaviour in three ways: by reducing their electricity consumption, by shifting to off-grid options like solar power, or by stealing electricity and not paying their bills. As a result, the precise impact of a price increase on the government's revenue is unclear, even though removing the subsidy would lower the government's budgetary costs.

Additionally, a sharp increase in residential electricity prices could have distributional consequences. In Pakistan, electricity prices are set through an average pricing mechanism, whereby the total cost of electricity is divided by the total projected demand to determine the cost per unit of electricity. As a result, when demand for electricity falls, the cost per unit of electricity increases due to fixed costs, such as capacity costs, which are a substantial part of the electricity tariff in Pakistan. This implies that as electricity prices increase, individuals who can readily transition a significant portion of their electricity consumption to off-grid alternatives will face a lower burden of the high fixed costs associated with grid electricity. In the urban context these would be the wealthy, who own houses with spacious roofs. Conversely, middle-class urban citizens living in apartments with limited options to switch to off-grid solutions will increasingly bear the brunt of these high fixed costs[4].

A significant increase in industrial electricity prices can also lead to problems such as causing exports to decline precisely when Pakistan needs them the most to support its poor balance of payments. In the medium term, if capital is mobile, it could even leave the country, particularly if other countries in the region offer higher margins through lower costs. Furthermore, a resulting decrease in the productive capacity of the economy can

shrink the GDP, making it harder to repay the government debt even if the tax net is made wider.

Possible Way Forward

To tackle these issues, the Pakistani government must undertake several measures. First, poorly-targeted subsidies should be phased out incrementally, providing the government adequate time to address unintended consequences through alternative policies. Neglecting to do so could lead to a decrease in GDP due to the impact on firms, and lower-than-anticipated revenue generation in the power sector, stemming from issues like increased electricity theft and non-payment of bills.

To improve targeting for residential subsidies, the government should rely on existing transfer programs such as Ehsaas/BISP and provide cash transfers to those who are poor. Any cash transfer that is equivalent in expense to an electricity subsidy is welfare-improving because the individual can utilize the cash as they see fit. Furthermore, cash transfers cast a wider net, with the ability to reach even those households who spend on energy, are poor, but are off the grid. However, the government must exercise caution to ensure that the disbursement of these transfers is not influenced by politics and that they are disbursed to those in genuine need, rather than those with political connections.

In the short term, the government can improve the process by which electricity prices are determined. Currently, fixed costs such as capacity payments, which are part of take-or-pay agreements, are considered a part of the unit cost of electricity. This approach is inefficient because the marginal cost of an extra unit of electricity is different between the electricity producer and the end-user. Consequently, there is a need to improve how electricity prices are set.

One way forward for the government is to raise money to pay capacity costs from sources outside the electricity sector, such as through other forms of taxation like income tax, VAT, and property taxes. This is feasible since capacity costs in Pakistan are independent of the demand for electricity and are known well in advance. However, this solution assumes that the government has enough fiscal capacity to raise this substantial sum of money through other tax instruments. It is also pertinent to note that this solution would work in Pakistan's context given the take or pay nature of capacity contracts in the country. These contracts have made capacity payments equivalent to a lump sum transfer that is currently being inefficiently raised via electricity tariffs for the power producers[5,6].

In the medium term, the Pakistani government should aim to reduce theft and non-payment of electricity bills by testing and implementing various interventions such as outsourcing bill collection and theft prevention to local NGOs and other third parties who can enforce these measures more effectively; using village councils and religious leaders to raise awareness about the social and religious implications of electricity theft; and offering better financial incentives for meter readers and distribution company staff to detect theft and non-payment and enforce penalties. The government should conduct pilots to determine which interventions would be most cost-effective in Pakistan's context and adopt policies with the highest return at scale.

In the long term, the government needs to address the deeper structural issues in energy supply. This includes establishing an electricity market where producers bid on capacity and electricity supplied, and the cheapest production offers are given priority. The government should also focus on promoting cheaper renewable sources of energy, and nuclear energy, that do not rely on imported fuel. It should renegotiate

existing contracts with power producers and aim for better contracts that consider whether high payments to producers are worth the uninterrupted supply at peak demand.

REFERENCES

[1]This list is by no means exhaustive. There are other pertinent issues such as those with merit order, and the government bloat, among others, which we will not focus on in this article

[2]Use of income tax credits for exports is just one example, which may or may not work in Pakistan's case. The broader point is that if the government has budgeted a sum of money to spend on boosting exports, is an electricity subsidy the best way to spend this money?

[3]https://www.geo.tv/latest/470257-imf-conditions-re1unit-surcharge-imposed-on-big-power-consumers

[4]Such effects may not materialize rapidly if the cross price elasticity to switch to off-grid option in the event of an increase in price of grid electricity is low. Credible estimates for this elasticity are lacking. Nevertheless this is an important behavioral margin that policy makers need to be aware of.

[5]In other countries the issue of capacity cost is tackled differently. For example, in the US some regions have a separate capacity market where the producers bid the cost at which they can keep their plants operational to provide electricity. Furthermore, residential customers are charged a capacity charge based on their predicted peak load and not their current consumption.

[6]Such a policy may be difficult to implement. One purpose of this article is to initiate the debate on pricing strategies, of which there are many. For instance, the government could consider reducing variable charges for residential customers and partially financing capacity costs through new charges based on each customer's peak load. Under such a policy, those using high-load appliances like air-conditioners would bear a larger portion of the capacity cost compared to those using low-load devices such as fans and bulbs. To uncover which precise strategies are implementable, and will deliver the best results in Pakistan's context requires further discussions between policy makers and researchers.

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