

How to Solve Pakistan's Power Crisis?

Brief Prepared for Policy Symposium on Energy Reforms in Pakistan

29th November 2013



SDPI
Sustainable Development Policy Institute

The Economic Survey of Pakistan notes that during 2011-12 around USD 4.8 billion or 2 percent of gross domestic product (GDP) was lost due to power sector outages. This is a major factor behind Pakistan’s disappointing economic performance over the past 5 years, with GDP growth averaging under 3 percent (GoP 2013).

The National Power Policy by the new government recognises that, in addition to the direct adverse impact on growth, the power crisis is bleeding the national exchequer through still high hidden and cross subsidies as well as administrative and line losses (theft). However SDPI’s household-level survey conducted to probe people’s willingness to pay higher tariffs in the wake of power sector reforms, reveals little understanding of the causes of the crisis. In this brief we touch upon 3 such causes, namely: inability of consumers to understand that elimination of load-shedding will require full economic-cost pricing, insistence of politicians on maintaining untargeted subsidies (having weak impact for poor), and inability to stem administrative and line losses (including theft).

1. Willingness to pay for power

The most fundamental principle in economics is ‘getting prices right’. The price of a good indicates how much is consumed (demand) and how much is produced (supply). When fixing tariffs it is important that they cover the costs of generating, transmitting and distributing electricity. Failure to do so will mean that generation companies (GENCOs) and distribution companies (DISCOs) lose money and go out of business.

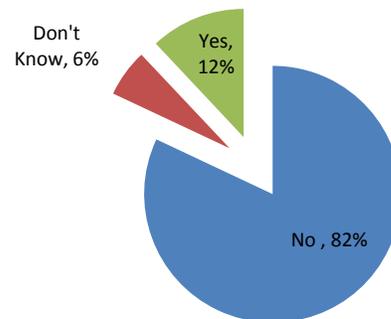
We establish here the unwillingness at household-level to pay for the power consumed. Below we exhibit how the recoveries of some very large DISCOs have deteriorated over time. Their clients have not paid for the power consumed. In Hyderabad, for example, only 60% of the power supplied in 2012 was paid for – in a city of over 6.5 million people.

DISCO-wise Revenue Collection				
DISCOs	2007-08	2008-09	2010-11	2011-12
PESCO	71%	67%	78%	68%
HESCO	77%	68%	59%	60%
QESCO	86%	80%	41%	36%

Source: DISCOs Performance Statistics Reports 2008-2012

DISCOs are also unable to adopt the normal commercial practices in other countries of disconnecting customers for non-payment because of unclear legislation and political pressure. To add to this, federal and provincial governments are also power sector defaulters. Such chronic default by government and non-government consumers is a major reason behind recurrence of circular debt.

Will households pay if power cuts are eliminated and tariff is increased by 10%?



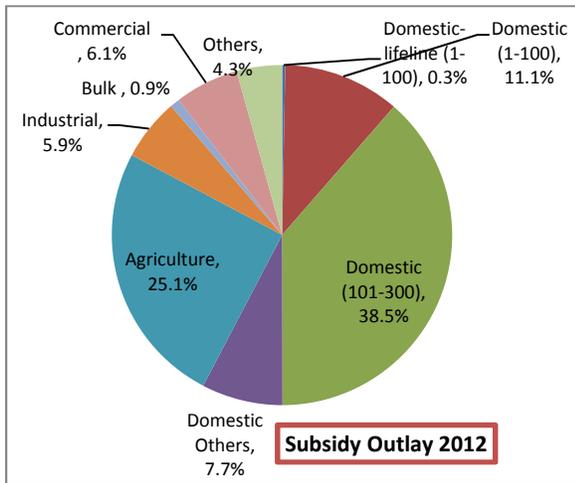
Source: SDPI Survey Unit 2013

SDPI’s household-level survey results, (above) reveal little understanding

among the consumers that tariffs do not cover costs and that is the main cause of power cuts and stoppages. Consumers want an end to load shedding, but most say they are not prepared to pay the full economic cost of producing power.

2. Cost of maintaining subsidies

The fundamental rationale for subsidising electricity tariffs is to augment the paying capacity of the poorest of poor. However once subsidies are provided across the board, people start to demand them as their right and politicians feel compelled to maintain this distortive fiscal burden to win popularity.



Source: Planning Commission of Pakistan, 2012

The above chart illustrates the contradiction between the rationale for subsidies and actual practice. Only 0.3% of subsidies in 2012 went to the poorest consumers, those using less than 100 units a month. There is no economic or social logic for subsidising the other consumer categories.

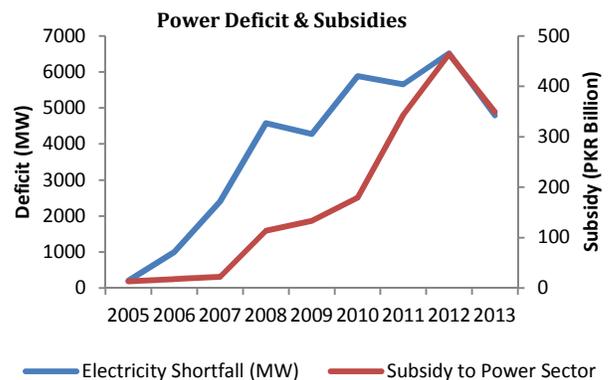
Subsidy by the government on power consumption (Rs/kW)

	LESCO	GEPSCO	FESCO	MEPCO	HESCO	SEPCO	QESCO	PESCO
1. Residential, <700 units	0.4	1.4	1.4	2.9	3.9	3.9	1.4	4.4
2. Industrial, (66.132 KV & above) - TOU (Peak)	2.1	2.1	2.1	3.1	6.6	6.6	4.0	7.1
3. Agricultural, 5 KW & above -TOU (Peak)	1.5	1.5	1.5	2.5	6.0	6.0	3.5	6.5

Source: Economic Survey of Pakistan, 2013

The table above shows the wide variation in subsidies across sectors, regions and consumption levels. Even residential consumers using above 600 units were being subsidised in 2012. While the new government in 2013 has rationalized subsidies, we argue below that the current subsidies are still more than the global norm of 100 units for a lifeline block.

Since 2005 the typical politician's response to the power deficit has been to keep subsidising expenditures and not risk political office by transmitting full economic cost to consumers. Both power deficits and subsidies have grown in a similar pattern. Suppressed tariffs meant operators had insufficient funds (or incentive) to fully utilize existing capacity or adopt cheaper sources of generation.



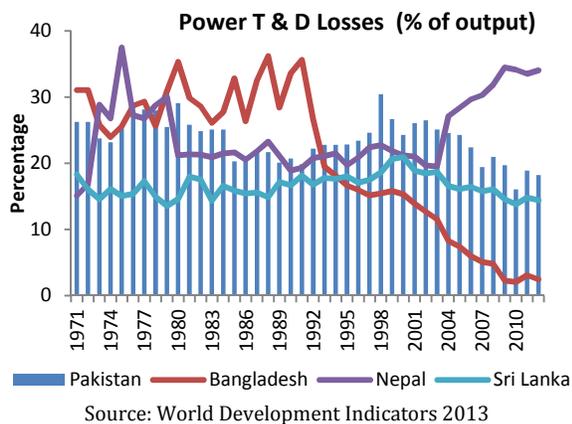
Source: NEPRA and Planning Commission of Pakistan 2013

There has also been a lack of transparency in subsidy allocation and tariff setting. Most prices are determined

by supply and demand in competitive markets. However, where markets are uncompetitive government regulation may be needed. Since Pakistan's DISCOs are monopoly suppliers in their regional markets, NEPRA was established to ensure monopolies are not abused. NEPRA officials' autonomy has been breached on several occasions. Most notable was the intervention by the Judicial authorities which ended up carving out their own role in 2012 and intervened with orders that hampered implementation of NEPRA orders.

3. Administrative and Line Losses

It is unthinkable that responsible governments let incidents of theft and efficiency losses in generation, transmission and distribution (T&D) pass so easily.



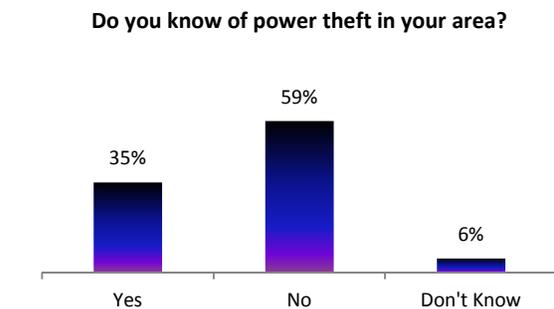
The T&D losses in Pakistan are higher than 117 countries in the world. The world average is 8.8% while in Pakistan these losses stand at 25%.

In August 2013, the Secretary of Water and Power Ministry informed the Senate Standing Committee that Pakistan loses annually PKR 150 billion (USD 1.7 billion)

in line losses and power theft. Until August 23,770 cases of theft were registered and under trial, but only 3 cases were punished. Moreover, the fine imposed was under PKR 5,000 in each case.

The above clearly indicates lacunae in the accountability mechanism. This requires amendments in Pakistan Penal Code so that there is certainty of effective punishment in cases of energy theft.

SDPI's firm-level survey conducted in major business centres of 4 provinces indicates that the power sector defaulters are well known even in their own communities. Yet they are never reported, as there is a strong perception that there will be no effective trial on such instances of crime.



Source: SDPI Survey Unit 2013

4. Hopes from National Power Policy

While the National Power Policy promises a plethora of reforms aimed at strengthening efficiency, competitiveness and sustainability – addressing the above 3 fundamental causes of the energy crisis is of foremost importance.

Tariffs and subsidies: the draft policy recognizes that subsidies should only

benefit the poorest of the poor. The definition of a poor consumer is someone utilizing less than 200 units of electricity a month. Globally, 'lifeline blocks' are typically no more than 100 units a month. We believe that the current ceiling is still high and should be lowered. Similarly, there is no justification for subsidising commercial, industrial and bulk users. The policy aims to phase out subsidies over 3 years. Given the heavy fiscal cost of subsidies we recommend that all subsidies (including hidden and cross subsidies) - except perhaps a 100 unit lifeline block - should be phased out over the next 24 months.

It is important to understand the incentives of buyers and sellers. A much more effective method of protecting the poor than subsidizing items like electricity and wheat – without distorting market functioning – is to provide them (and only them) with cash transfers. Well-functioning targeting mechanisms have already been developed through Benazir Income Support Program (poverty scorecard database).

Curbing theft: Unaccounted-for-gas controls should be enforced and the saved gas diverted to the power sector. The policy notes that just a 10 percent diversion can produce an extra 2000MW.

Current transmission losses of 3.6 percent are higher than the NEPRA allowed losses of 2.5 percent. This immediately calls for introducing performance contracts (clearly mentioning targets for reduction in losses) for grid stations under National Transmission and Dispatch Company.

At the DISCOs level as well the power policy aims for a similar mechanism of performance contracts aimed at

increasing accountability of heads of DISCOs. It is further recommended that such contracts should have specific clauses on reduction in distribution losses and full collection of receivables from consumers.

Competing for fuel allocation: The allocation of fuel to GENCOs should be linked with their efficiency levels. If the Independent Power Producers (IPPs) are better performing in efficiency terms then IPPs should get preference over GENCOs in fuel allocation. According to Ministry of Water and Power's own estimates a 4000mtoe shift from GENCOs to IPPs will save PKR 77 billion annually. Whereas GENCOs spend PKR 13 billion per month to generate 650 MW, IPPs spend only PKR 10 million per month to generate 1150 MW.

5. Conclusion

The main objective of this policy brief is to highlight the link between lower than economic-cost tariffs and load shedding. If tariffs do not cover GENCOs' operating costs they are unable to buy sufficient fuel. This is why many power stations are operating below capacity. To eliminate load shedding Pakistan needs not only to increase utilisation of existing capacity, but also substantial investment in new capacity. However, investors require tariffs high enough to cover both operating and capital costs, i.e. including a return on capital invested. There has been minimal investment in recent years because tariffs have been too low to cover operating, let alone capital, costs. With growing demand this has meant an inevitable increase in load shedding. The only way to eliminate load shedding in the short term is by increasing tariffs.

Once consumers understand that artificially suppressing tariffs is largely responsible for load shedding, it should become easier for the political representatives to take the difficult decision to reduce untargeted subsidies and pass on the full cost of supplying power to consumers. Finally, these political representatives will also need to assert themselves and confront the power sector defaulters and crackdown on theft that is resulting in losses well above international norms.