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Power Crisis in Pakistan

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Poor fiscal framework is at the heart of the current power crisis in Pakistan. Sufficient long term fiscal space has not been made available for the development of the power sector. There has been an output loss amounting to 2 percent of GDP. Not enough power is available, and the available power is far too expensive to be affordable. On average, electric power is generated at a hefty cost of rupees 10.17 per kilowatts/ hours at the moment and, is at rupees 7.12 per kilowatt/hours sold to the consumers. This is a net subsidy of rupees 3.05 per kilowatt/hours, for which there is little space in the budget. On an average hot summer day, at peak consumption, 800 million rupees are passed on as subsidy on tariff, to the consumers. This is 292 billion rupees a year. However, with winter decline in consumption and load-shedding together, the government has succeeded in keeping this subsidy at rupees 85 billion, for the first six months of the current financial year, up to December 31, 2010. At this relevantly controlled level, attained after many seasons, 170 billion rupees will be required for power subsidy alone. Coupled with the unpaid claims of last year to the tune of rupees 145 billion in this lieu, the federal government will need 325 billion rupees to keep the circle functioning. This is almost double of the total allocated resources to development, during the financial year 2010-11. The unpaid amount of subsidy is the circular debt, which is the current concern. Pakistan's circular debt was 1.4 billion dollars in June 2010. With this year's addition, another dollar one billion is likely to add up to the pool. With rupees 167 billion, Term Finance Certificates issued as debt, total domestic banks' exposure to power sector has risen to Rs 500 billion. This includes project financing, fixed investment and working capital loans. The exposure represents nearly 13% of Domestic Banks' Asset books.

Why are the cost of electricity production so high in Pakistan and, why are the tariffs even higher than the incurred cost? The answer lies in the fact that Pakistan produces bulk of its electricity by burning fuel oil, and less is generated through the freely available hydel sources, which has a generation potential of roughly, 40,000 megawatts. This makes electric power expensive. Immediately after its production, another thirty percent is added to the price of electricity. This is to cover thirty percent which is termed as 'line losses.' In fact, much of this thirty percent is stolen with the patronage of the powerful.

Fuel Mix

Pakistan generates 92 billion units of electricity every year. Of which 32 percent is thermal power generated by burning furnace oil, costing rupee 12.4 per unit. Another 32 percent of electricity is also generated through thermal process by using gas, costing rupees 5.46 per Unit. This brings thermal production to 64 percent of the total generation, which is the most expensive. Of the remaining 36 percent, 32 percent is hydel power, which costs only rupee 1.02 per unit. The remaining 4 percent is generated through other sources, including coal and nuclear source, its generation cost is rupee 4.30 per unit. This brings the production cost at a level where the inherent advantage of economical hydel generation is totally compromised. And, with every increase in the international oil prices, Pakistan witnesses increased electric tariffs.

Policy failure

By the beginning of the last decade it was clear that Pakistan needed one thousand megawatts of additional power generation, added to its capacity, every year. This was the bare minimum to keep pace with growing demand. The government announced the 2002 power policy with very attractive terms, allowing repatriation of profit and reasonable tariff, over and above the fuel cost. The 2002 Policy, despite its very attractive terms and conditions saw virtually no foreign investor coming to Pakistan's Power Sector. On the contrary, new projects that came online in CY10 under the 2002 policy are all locally financed. The main reason for this is the fall of the IPP program of the 1990's and the very difficult experience of Foreign Investors following its breakdown.

As a result a little generation capacity was added till 2007, which was the tipping point. Pakistan's dependence on the existing generation capacity is a hundred per cent. During the winter months, when hydel generation dips by more than three thousand megawatts, dependence on thermal electricity increases to a point where the paying capacity of the government becomes a hindrance. At the moment, Pakistan's installed national electricity generation capacity is 19461 megawatts, whereas, the dependable capacity is 17779 megawatts. But, the maximum available capacity did not exceed beyond 14840 megawatts throughout the season. On the other side peak demand during in 2010 reached 19450 megawatts. Why the installed capacity does not translate generation? Because many IPPs are not paid according to the schedule, resulting in lower capacity generation. The government has no money to pay, it forces the public sector fuel supplier Pakistan State Oil to keep supplies supple, which is not possible indefinitely, without asking for the payment. At the moment the fiscal barrier is the biggest reason of load shedding, which in turn is compounding the fiscal situation, by reducing productivity.

Compound Deficiency

As it becomes more difficult to afford expensive furnace oil for electric generation, local gas is used as a replacement. The situation has worsen to an extent where 31.4 percent of the natural gas is consumed by the thermal power sector, which was 1144 MMCFD(million meter cubic feet) during the first six month of the 2010. In comparison, domestic consumer is supplied only 16.5 percent of the total consumption, which was 601 MMCFD during the same period. The power sector consumed even more than the general industry, for which electricity and gas, both are essential fuels. After diversion of the bulk to the power sector, industry was forced to observe load-shedding of both electricity and gas. The Industry was provided a smaller share of 24.1 percent out of the total pool, which was 878 MMCFD.

Future

If nothing improves, the future of power sector will continue to hang in the balance. According to the reconciled generation enhancement plans, adopted in vision 2020, Pakistan is looking forward to add 20,000 Megawatts additional generation capacity over the next ten years with an estimate cost of $32 billion. The Government envisages a 55-45% Public-Private mix of investment, in which GOP intends to provide USD 17bn using borrowing and budgetary funds, while an estimated USD 15bn is expected to be raised by the private sector. Financing capital-intensive projects would require multiple sources of funds using limited-recourse project finance through a portfolio approach in terms of fuel diversity.

As the investment climate is declining rapidly, the prospect of improving the power sector is becoming difficult, especially, when the government continues to slash down the proposed annual development budgets, where even the carry forward projects are postponed to make room for day-to-day expenses. Nothing can succeed if major structural adjustment reforms are not done and they must be backed by fiscal prudence in recurrent spending.

A Large Dam would have averted Gas Crisis

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Over the years, there has been a substantial increase in the consumption of gas in Pakistan, which is a locally available energy resource. Due to the shelving of the Kalabagh Dam project, there was a renewed interest in exploring gas as a power resource. The discovery of gas reserves further fueled the widespread and unabated exploitation for meeting energy needs. This has apparently skewed Pakistan's energy mix due to disproportional dependency on gas, which has led to insignificant attention on harnessing other energy sources, especially renewable energy to meet the national energy needs. A burgeoning energy consumption of the populace has in turn sped up the depletion of gas reserves. Reliance on a single energy source is not only unsustainable but would prove to leave an indelible impact on Pakistan's economy and its people.

Gas had initially been considered as a feasible resource due to the low costs involved in its power generation. It was believed the gas would contribute effectively in Pakistan's economic growth spurt, given the vast expanse of reserves present. However, the decision to rely on gas did not take

into account the nature of future consumption and finiteness of the resource. Focus on other energy sources took a backseat, particularly power generation from hydroelectric schemes, which would have, in hindsight, help avert the gas crisis Pakistan is facing today. Therefore, there are plans underway of importing gas from Iran and Turkmenistan so as to reduce the supply demand gap, which is expected to increase considerably over the new few years.

In hindsight, had the Kalabagh Dam been constructed, the total annual production would have been 11,400GWh. However, as the dam project was never initiated, the power that it would have generated was instead generated from local gas reserves. The dam would not only have saved the costs of electricity generation but it would have dispersed monetary losses incurred due to the present gas shortfall. It is pertinent to note that if the Kalabagh Dam became operational in 1993, 2737 billion CFT of gas would have been preserved. Between the period 1993-99, a saving of 2.7 trillion CFT from a consumption of 10.9 trillion CFT would have been made, which is about 24.77% of the total gas consumed during the period. Gas is used extensively as fuel in a number of sectors; the predominant usage of it for power generation (46%); household consumption (21%) and fertilizer production (25%), etc.

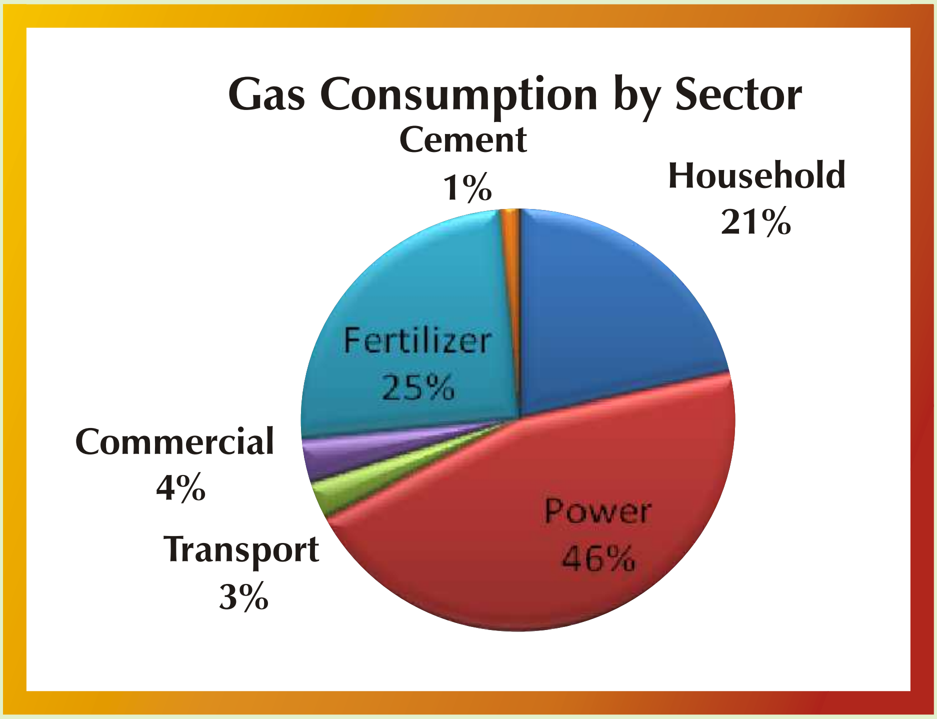

Figure 1. Gas Consumption by Sector

By 2008-09, there was a significant gas consumption in the household sector (214.1 Billion CFT) and transport (88.24 billion CFT). Therefore, there could have been tremendous saving of gas, which was otherwise used in consumption in other sectors. Also, if natural gas was used only for domestic purposes, the gas supply could have been extended to a longer period of time. The repercussions of the gas shortfall have been the inevitable business losses to CNG stations and rising socio-political unrest. A timely decision in favor of hydropower development would have saved the country from the precarious energy crisis it is facing today. Furthermore, Kalabagh Dam would have guaranteed the continued supply of gas to the domestic and transport sectors by 12.78 and 31 years respectively.

The gas pipeline that has been proposed between Iran and Pakistan has recently been started and the anticipated completion date is 2014. This means that till the time the pipeline is completed, the country will continue to be plagued by the gas crisis problem. Further, there has been an unimpressive progress on renewable energy development, which could have reduced the burden on gas consumption. Technologies such as solar heaters, ethanol fuel and solar cookers could have potentially mitigated the demand from the transport and household sectors. There has been an absence of a concerted effort to explore alternatives to gas, which would have prevented its fast decline as the primary energy source. Despite gas being a primary energy resource, its cost of generation is a lot higher than that of hydroelectricity. Therefore, there is no rationale behind opting for gas as an energy source, whereby the cost of generation is high and may in long term be deemed unaffordable. The Kalabagh Dam could have saved Rs. 76.8 billion, if the energy produced was solely used to generate electricity. In addition, the share of oil in the energy generation mix is 32.3%, which again costs higher. If this was used to replace oil, a saving Rs. 124.5 billion could have been made.

A heavy dependency on natural gas also contributed substantially to Pakistan's conundrum of circular debt. This problem has not only debilitated WAPDA's effectiveness and performance but has resulted in long hours of power outages, which have had tremendous ramifications for the industrial sector. There has been no significant expansion of the national grid to remote rural areas either, which has continued to alienate large swathes of the population from the provision of energy. The present gas shortage have served to aggravate miseries of the common man, with no credible relief in sight. Evidently, a gas shortage is one of the greatest impediments to development of Pakistan commensurate to its national interest. Besides the incurrence of heavy financial losses, the gas shortfalls have also led to the termination of jobs, which would subsequently increase the level of unemployment in the country. It is noteworthy that Kalabagh Dam alone would not have thwarted the crisis, which was imminent in any case. However, the dam would have to a great extent delayed the onset of the crisis. Pakistan's power planners should have wholeheartedly taken account the benefits of hydropower projects, whereby investment of time and effort on that would have perhaps never allowed the crisis to be nurtured in the first place.

In light of the gas shortfall and high exploitation of reserves for power generation, there are a number of measures that the government must undertake. These would help to not only mitigate the reliance on a finite energy resource but help build national consensus on the Kalabagh Dam. These include installation of telemeter systems on rivers to ensure transparent water management; expand investment in the hydropower domain; renew commitments to increase the share of hydroelectricity in the energy generation mix; the timely implementation of hydropower projects has to be followed through; extensive use of CDM to finance Renewable Energy and hydropower projects.

Can Pakistan Raise Tax

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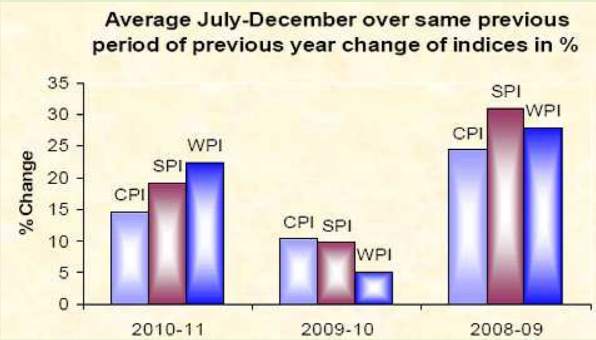
As the prospect of imposing a Value Added Tax (VAT) by any name, seems to have dwindled, the federal government is all set to remove some exemptions from the current sales tax regime. Instead of a fully fledged VAT or the Reformed General Sales Tax (RGST), the expanded sales tax list may be made functional through an ordinance. The ordinance may later be approved as law through a money-bill, with the passage of the federal budget in June, this year. This might raise a couple of billion rupees as tax revenue, but the purpose for which the new taxation system was being introduced will be removed permanently.

Ironically, this is being allowed for the sake of political expediency. The current fiscal deficit of Pakistan has reached almost 7.4 percent of its Gross Domestic Product and, with annual borrowing from the State Bank reaching rupees 1500 billion; it is likely to reach 8.4 percent at the year end.

Inflation



Source: FBS

December over corresponding month of previous year: Change of indices in %

Index	2010-11	2009-10	2008-09
CPI	15.46	10.52	23.34
SPI	21.65	13.40	25.76
WPI	25.72	14.96	17.57

Source: FBS

On the other hand, there is a clear shortfall in the revenue collection. The Federal Board of Revenue (FBR) has conveyed to the federal government that it would not be possible to collect rupees 1689 billion, during the current financial year. In response, the government has revised the annual tax collection target to rupees 1600. This has left the federal government with no other option but to further slash the development budget, and to adopt coercive tax collection methods like increasing withholding tax and delaying refunds to keep the books balanced. After announcing a 'fiscal emergency,' the Finance Ministry has briefed the Prime Minister that if the current state of affairs is not corrected immediately, Pakistan will fully erode the ongoing structural adjustment reform process under the $11.3 billion Stand-by Facility, of which, the International Monetary Fund has withheld the last two tranches.

International Monetary Fund

The International Monetary Fund, in view of the recent floods and the ongoing war against terror, has provided a nine month breather to Pakistan. But, it is not without conditions. Coupled with the ongoing reforms under the Stand-by Facility, the Fund has made three mandatory conditions for the sustainability of the fiscal framework. They are; 1) Imposition of the RGST, at least in the second half the current financial year,2) Implementation of the Treasury Single Account and, 3) Removing all subsidies in the energy sector.

The RGST

The International Monetary Fund requires RGST to be introduced in its original form, which is acceptable as a replacement of VAT, and not a mere extension of the current General Sales Tax. The major difference is that the RGST will include services and, under the umbrella of the new law provincial revenue, machinery will be geared up to generate revenue and carry forward tax administration reforms. Reforms are necessary in the current framework of the National Finance Commission Award. Under the NFC, 56 percent of tax revenue will be transfers to the provincial governments. This will leave the federal government with remaining 44 percent. At 1600 billion 44 percent is rupees 704 billion, which is enough only for debt servicing and provision of some subsidies. Next year revenue at the disposal of the federal government will be reduced further. The net transfers from the federal to the provincial government is without any binding. In India, this transfer has two binding conditions; i) that the provinces will show a minimum agreed growth in revenues through a framework and, ii) an agreed portion of the transferred amount will be spend on development. However, in Pakistan's case there is no such binding and provinces' have not taken any measure to improve on these two accounts. As a result, the burden of development is likely to remain with the federal government, in the foreseeable future. The only remedy is RGST, which has proved its buoyancy in other countries (OECD countries). If the RGST is imposed in value added mode, the retail seller would be forced to identify the whole supply chain, which will automatically register all forms of taxable incomes. It will create a new pool of taxable income helping improve tax/GDP ratio. In addition it will improve the tax payers' registration process. It will also help develop better tax administration which would help lower the overall tax rates for better compliance. Above all, it will help bring the service sector into the tax net, which has a large share in Pakistan's economy. That experience, has been tried and tested on a global scale.

If this is done, it can provide the federal government a kind of fiscal freedom that will ensure fiscal federalism, under the new NFC, and it will allow continuation in investment, in those development projects which can expand the 'Future National Income.'

Treasury Single Account

The Federal government spends most of the budget through the end user. There exists multiple accounts for dispensation, where more than rupees 200 billion have been parked. This is about $ 2.2 billion, which is more than IMF's next tranche and certainly, this is more than the annual allocation to Pakistan by the United States, through the Kerry-Lugar bill. Most of this money has been deposited in bank accounts at zero interest rates, on which banks are harvesting interest. The Government, for its own utilization, is borrowing money at high interest rates, which is consuming funds that are meant for the national development.

Subsidy of Power Tariff

The subsidy on power tariff is a national burden; certainly Pakistan cannot afford Rs 260 billion as annual power tariff subsidy. Through a suitable multiple billing system, and by curbing power theft the Government can save this large amount, it can balance its books and carry out its annual development agenda.

Up till now, the incumbent government has not done anything to implement these reforms. To put it simply, it does not want to alienate voters during the second half of the electoral term. This has brought Pakistan at a point where the future of democracy is at stake. Unless there is a safety net, Pakistan would once again be compelled to ask for the support of the international community for financial assistance.

(U.S. Dollars in Thousands)

Exports Imports Balance of Trade December 2010

Series	* December, 2010	* November, 2010	% Change in December, 2010 over November, 2010
	$	$	$
Exports	2,126,578	1,776,677	19.69
Imports	3,750,982	3,125,013	20.03
Balance of Trade	-1,624,404	-1,348,336	20.47

Series	* December, 2010	December, 2009	% Change in December, 2010 over December, 2009
	$	$	$
Exports	2,126,578	1,566,120	35.79
Imports	3,750,982	2,907,558	29.01
Balance of Trade	-1,624,404	-1,341,438	21.09

Series	* July - December 2010	July - December 2009	% Change in July - December, 2010 over July - December, 2009
	$	$	$
Exports	10,976,361	9,099,430	20.63
Imports	19,125,877	15,994,268	19.58
Balance of Trade	-8,149,516	-6,894,838	18.20

Source: FBS

Socio economically speaking the year 2010 has been quite challenging both for the people as well as for the government of Pakistan and I don't see much improvement in this situation during 2011 too.

Except the foreign exchange reserves all other macro economic indictors are showing a bleak picture. The problems of fiscal and fuel deficit are getting aggravated due to lack of effective social protection strategy which in turn makes people the first casualty of any macro economic disciplinary measure. Various political forces (both in opposition as well as allies of current government) use this situation to pressurize the government which instead of coming up with a blueprint for ensuring the livelihoods of common masses rely on short term measures like postponing the documentation of economy through RGST, or continuation of non targeted subsidies on fuel.

There seems to be no let up in circular debt in power and fuel sector. Revenue generated through direct and non direct taxes would be barely sufficient to meet the costs of debt servicing and defense requirement leaving very little for day to day administration, and public sector development programme (PSDP). Lack of funds for day to day administration coupled with non developmental expenditures (by federal and provincial governments) and non functional democracy in the country aggravates the problem of governance. Reduction in PSDP on the other hand would impact the pace of growth and development.

Ongoing "war on terrorism" on our western frontiers and series of ethnic conflicts in Karachi are also impacts the soicio-political and socio economic conditions. Post flood reconstruction and rehabilitation in flood affected areas is still a far cry.

On top of everything, global food price hike is on cards once again. According to the recently released World Food Price Index, prices of food commodities have reached at historic level since 2008. Although global food crisis should not have a direct bearing on food prices in Pakistan (as we are a food grain surplus country), yet governance crisis may lead to food inflation (and reduced supplies too) in Pakistan in near future.

In my opinion we as a nation can survive from all the above mentioned deficits provided we can overcome trust deficit prevailing between people and government, treasury and opposition benches, and international community and government of Pakistan. One way of building trust is turning more transparent and adapt a participatory approach for getting ready to take tough decisions for macro-economic reforms in these troubled times. This should be coupled by well thought out social protection strategy to minimize the side effects of macro economic stability measures at micro level. Finally the governments (both federal and provincial) would have to adapt austerity measures through a substantial reduction in their non developmental expenditures.

In my opinion current adhocism would not provide any sustainable solution to problems facing the people as well as government of Pakistan. This is about time that we should lean to find out a solution for our economic issues through political wisdom and not through politicizing them.

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