

**GENESIS OF POWER CRISES & ITS
MANAGEMENT IN PAKISTAN –
PUBLIC PRIVATE PARTNERSHIP TO
MITIGATE POWER CRISIS**

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ABSTRACT

It is now widely accepted that the 21st century needs a mix of public private partnership strategies. Developing societies need to inject private initiatives with doses of public action that encourage economic restructuring and technological advancement. A public private dialogue (PPD) will help in opening channels of communication between the government, the private sector, donors and other concerned parties. The concept of private public partnership is about how different stakeholders can use PPD to promote private sector development and reduce poverty.

To meet the ground requirements of the increasing population and to sustain the development in different projects, the need for improving management is recognized and these institutional changes are considered in compatible in Pakistan's environment. It is recognized that further and greater participation in different managements is of considerable value and needs to be persuaded. In Pakistan people's participation to mitigate power crises can be achieved through a gradual and phased process.

1-INTRODUCTION

Energy is the lifeline of a nation. The economic engine and the wheels of industry, agriculture and business need energy to move forward. On the social aspect energy consumption per capita is a key indicator of the quality of life of the citizens and community. Pakistan economic, industrial and social growth has been greatly constrained due to an increasing gap in energy demand versus capacity. By involving public private partnership the energy crises in Pakistan can be mitigated to some extent.

The infrastructure sector in Pakistan comprises power, telecommunication, roads, ports, railways, air transport, water supply, waste management, information technology, and industrial estates. The public sector has remained the main provider of basic infrastructure. However, the large fiscal deficit has limited the Government's capacity to meet growing infrastructure requirements. Countries, such as Pakistan, that for a long time have financed infrastructure projects directly from fiscal budget allocations often lack the necessary institutional and regulatory capacity to facilitate private sector participation in infrastructure provision.

Infrastructure financing will have to rely more on private resources. The opportunities for developing and financing public private partnerships in Pakistan are considerable. There is proven demand for new projects in the **water, power, wastewater, solid waste, and transportation sectors.**

2-CONCEPT OF PUBLIC PRIVATE PARTNERSHIP

PPPs involves the investment of Private Capital to design, finance, construct, operate and maintain a project for Public use for specific term during which a private investment consortium is able to collect revenue from the users of the facility.

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Privatization represents a takeover of publicly owned entity. For the state the main attraction is that the Private sector can bear part of the financial burden of investing in infrastructure. Since the private sector is expected to be more efficient than the state in running certain concerns and is also likely to charge actual costs of services from customers, the burden of subsidies can be minimized. The other attraction is that state resources can be freed to provide funds in areas and sectors needed for the socio-economic uplift and stabilization of the less advantaged citizens. The state thus can retain to its core business of providing good governance enhancing knowledge and skills and providing basic needs for its citizens. For this, it is necessary to restructure the role of government so that operation can be separated from policy and independent regulatory authorities can be established.

The Government has set up the Infrastructure Project Development Facility (IPDF) under the auspices of the Ministry of Finance (MOF), to generate PPP projects with public sector institutions (line ministries, provincial Governments, local bodies, state owned enterprises etc.)

3-POLICY ON PUBLIC PRIVATE PARTNERSHIPS

The Government recognizes the importance of improving and expanding infrastructure services for sustaining economic and social development in its Medium Term Development Framework (2005-2010) (MTDF). Improved quality and service coverage in power and water supply, transport and logistics are vital for Pakistan's economy and the livelihood of its people. The Government estimates that less than 50% of the infrastructure investment needs can be covered by public funds under the MTDF. A combination of policy reforms, institutional support, incentives and financing modalities is required to encourage private-sector participation in financing, constructing and managing infrastructure projects.

Various governments around the world as a service delivery tool have adopted PPPs. Instead of the public sector procuring a capital asset and providing a public service, the private sector creates the asset through a business (usually designed, financed, built, maintained and operated by the private sector) and then delivers a service to a public sector entity/consumer, in return for payment that is linked to performance. PPPs permit the public sector to reduce their capital expenditure (and redirect to promote urgent social needs) PPPs allow each partner to concentrate on activities that best suit their skills.

The following sectors need to be focused by Public Private Projects.

- i) **Small Scale Energy Projects** hydroelectric and captive power generation projects – other than those being facilitated by Private Power infrastructure Board (PPIB) and the Alternative Energy Development Board (AEDB).
- ii) **Mass Urban Public Transport** including buses, and intra and inter-city rail.
- iii) **Transport and logistics** including provincial and municipal roads, rail, seaports, airports, fishing harbors as well as warehousing, wholesale markets, slaughter houses and cold storage.
- iv) **Municipal Services** including water supply and sanitation; solid waste management; low cost housing, and health/education facilities.

Although, PPPs will become an integral component of the Government's overall strategy for the provision of public services and public infrastructure across all sectors, this does not imply they are the preferred option for improving the efficiency of services delivery but that they enjoy equal status among a range of possible service delivery options available to the Government. Sector specific policies may be developed as necessary to provide more detailed guidance.

4-ROLE OF PPPs TO MITIGATE POWER CRISES IN PAKISTAN

Electricity is one of the important sources of energy. On the eve of independence in 1947, Pakistan inherited only 60 MW of power generation capabilities. In 1958, when WAPDA was formed, this capacity had increased to 119 MW. WAPDA was formed to accelerate the development of Water and Power resources of the country. It rose to 7,000 MW due to completion of mega projects i.e. Tarbela and Mangla, hydropower projects and thermal power projects at Guddu, Faisalabad Kotri, Muzaffar Garh and Ghazi Barotha (Hydro Power) etc. Total installed generation capacity in Pakistan is around 19,560 MW. The distribution of hydel, and nuclear installed capacity in Pakistan produced by public and private sector as given in Table 1.

Table 1: Installed Power Generation Capacity of Pakistan

Sr. No.	Description	Capacity (MW)
1	WAPDA's Hydel Power Plants	6,463
2	WAPDA's Thermal Plants	4,834
3	IPP's Thermal Plants with WAPDA/KESC	6015
4	Nuclear Energy	462
5	KESC System including IPP's	1,756
6	Hydel Power Plants in Azad Kashmir	30
	Total	19,560

The power generation is highly capital-intensive investment. In Pakistan the equilibrium of demand and supply of power could not sustain due to increase in the pace of power demand in Pakistan. This resulted into severe load shedding and blackouts in the country. In order to bridge the power supply-demand gap, the government decided to mobilize private sector resources in the power sector.

The national demand for electricity has been raised and would keep on growing rapidly. Based on the present generation capacity, the hydel: thermal mix in the country is 33:67 which is almost the reverse of an ideal hydel-thermal mix, which should be 70:30 for overall economic development of Pakistan. Though induction of thermal generation through IPPs initially helps in overcoming load shading, it resulted in substandard increase in power tariff. Therefore, a sizeable injection of cheap hydropower through multipurpose storages is a viable option to keep the cost of electricity within the affordable limits of the consumers.

In Pakistan extensive private sector participation is envisaged in building additional power generation capacity of 7100 MW to meet the physical targets of power sector as given in Table-2.

Table 2: Core Projects to be commissioned during 2005-10

S.No.	Name of Project	Type	Capacity (MW)
Public Sector			
1.	Allai Khawar	Hydel	121
2.	Khan Khawar	Hydel	72
3.	Dubair Khawar	Hydel	130
4.	Keyal Khawar	Hydel	130
5.	Jinnah Low Head	Hydel	96
6.	Golan Gol	Hydel	106
7.	Malakand Hydro	Hydel	81
8.	Pehur	Hydel	19
Private Sector			
1.	New Bong Escape	Hydel	79

2.	Rajdhani	Hydel	132
3.	Gulpur	Hydel	60
4.	Small/Low Head	Hydel	50
5.	Matiltan	Hydel	84
6.	Kotli	Hydel	97
7.	Lakhra	Coal	450
8.	Thar Coal Chinese	Coal	300
9.	Dadabhoi	Coal	150
10.	Faisalabad	C.C.Gas	450
11.	Balloki	C.C. Gas	400
12.	Oil Based Power Plant	Oil	160
13.	Gas Based Power Plant	Gas	3100
14.	Renewable (Wind)		800
		Total	7100

5-OBJECTIVES

The Government's objectives in promoting PPPs are to provide:

- **More services**, as there is a huge backlog in basic services such as water and sanitation, solid waste management, transport and rural electricity. Not only do we need to catch up with the backlog, we need to start building infrastructure for future needs as well.
- **Better services**, as the quality of existing services is deteriorating due to lack of incentives and funding for infrastructure maintenance and up-gradation. The result is unclean water, unhygienic living conditions and inability to provide proper health care and education.
- **Affordable services**, as certain segments of the population cannot pay cost recovery tariffs, whereas the private service provider needs to recover costs in order to sustain operations. In such cases the Government will provide targeted (to low income consumers), explicit (not hidden as budget support) performance based (only provided once the service – such as 24 hour clean drinking water to the consumer's dwelling – is actually delivered).
- **Timely services**, as the Government do not have the capacity or the fiscal space to meet the immediate service demands of its citizens.

6-CONCLUSION

While Pakistan has demonstrated some pioneering experience with attracting private sector investment into the energy and telecommunications sectors, there has been very little progress in the key urban and municipal infrastructure related to water, wastewater, solid waste management, urban transportation, and roads. The core impediments include:

- The policies at National, Provincial, and local Government levels do not fully support PPPs as a viable options for delivering services in urban and local services;
- The laws that allow Provincial and local governments to contract out the development and operation of urban and local services to qualified private sector firms are not clear and supportive;

- Lack of institutional capacity within Provincial and local government departments to successfully identify, analyze, structure, tender, evaluate, contract, and regulate PPPs;
- The application of technical models and toolkits lack in Provincial and local government officials to use when analyzing PPP projects, conducting public sector cost comparisons, preparing RFP (Request For Proposals) for qualified contractors, drafting PPP contracts, evaluating bids, and regulating tariffs and responding to disputes with PPPs;
- Limited funds to hire experienced and qualified specialist to conduct pre-feasibility studies and prepare PPP transactions for local infrastructure projects that Provincial and local Government officials have identified;
- The long-term local currency, fixed rate debt financing is quite insufficient in Pakistan's capital markets which is needed for the sustainable financing of local infrastructure investments; and
- Inadequate legal authority, human capacity and toolkits to regulate the post-transaction performance and the price-adjustment reviews for PPP infrastructure and utility sector investments.

7- RECOMMENDATIONS

- The training for human resource development to oversee and manage the process of PPP project preparation and development is directly needed;
- Exploitation of renewable energy resources available in the country i.e. wind energy, solar energy, bio-fuel energy etc.
- Adequate and effective participation of the Private Sector.
- Utilization of our own huge coal reservoirs of about 184 billion tons for generation of electricity.
- Injection of cheap hydropower through construction of multipurpose storages dams with the effective participation of private sector to meet with the energy and food crisis.
- Fast track projects in pipeline be commissioned according to schedule.
- Appropriate of conservation measures, load management and public awareness is required to be adopted to improve the critical situation of power.

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