Dialogue Report

Energy Policy & Institutional Coordination

The Centre for Public Policy and Governance (CPPG) had published an issue of the Quarterly Research & News titled *Special Issue on Energy Crises & Policy* in October, 2013. Subsequent to the publication, CPPG held a policy dialogue on "Energy Policy and Institutional Coordination" on January 30, 2014 to collectively deliberate on the issues, and develop a consensus on the way forward. Professionals from International Power Producers (IPP), Power Distribution Companies (DISCO), Energy Department of Punjab, Federal and Azad Kashmir Government, energy planning consultancies, and energy technology firm participated in the dialogue.

During the policy dialogue, a broad consensus emerged among the experts on the following key points: one, lack of an integrated policy, planning, implementation and management had resulted in gross inefficiencies; two, though additional power generation capacity was required to bridge the supply demand gap, still the resolution of energy crisis demanded improving governance of the sector; three, the government needed to pay close attention to the market structure and set planning priorities accordingly; four, the government needed to rationalize the legal and regulatory framework, and develop institutional capacity through competent leadership, effective corporate governance and human resource development.

The participants were presented with the following set of questions, dialogue and discussion ensued and evoked responses were recorded as under:

Is Power Policy 2013 sufficient or does lack of an integrated policy adversely affect the sector? The non-public sector participants agreed that the Power Policy 2013 was overly ambitious and unrealistic. For example, the objective of building stated number of hydro power plants by the year 2020 was unrealistic, as a hydroelectric plant needed at least 10 years to build. It was suggested that the government needed to build political consensus, set clear goals, assess the costs that these projects entailed and show commitment to achieve these goals. It was underscored that the power sector constituted only 18% of total energy needs of Pakistan, and its woes were directly linked to the underlying energy mix. Therefore, the desired energy mix of coal, nuclear, gas, oil and renewable sources should be developed based on the overall energy needs. It was also thought that the public-private mix in terms of exploration, generation, transmission and distribution should be part of the larger energy plan.

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Intensive consultation was recommended between the federal and provincial governments to dispel any misperceptions, so that policy along with the execution plan could be adopted. In that spirit creation of a National Energy Authority was recommended.

Is there a need for a new energy plan or can earlier plans be used? Integrated Power Plans of 1994 and 2011, and Integrated Energy Plan of 2005 had been made by professionals using sophistical planning tools, soft-wares, rigorous analysis and due deliberation. These minimal cost plans articulated the energy mix based on achievable goals and suggested sites for new projects among other concrete recommendations to achieve the defined goals. The government need not start from scratch but build on the above stated plans and concentrate on implementation of an integrated energy plan and least cost power generation plan. But integrated planning required correct demand projection estimates inclusive of industrial growth, and demographic and behavioral changes. The real unconstrained demand in Pakistan was 25,000 MW against the production of 11,000 MW. Thus, any integrated plan should include an energy conservation plan.

What are the major governance issues of the Energy Sector? Executing the ambitious policy objective of Power Policy 2013 and good governance of the energy sector in general was dependent on having a competent team, which could conduct informed decision making; take ownership of the decisions and could be held accountable for them. Current team was devoid of these, because of a lack of concentrated effort on the part of the government. The

current Minister for Water and Power had to divide his time between multiple ministerial portfolios. Further, personnel occupying key positions were not permanent such as Secretary Water and Power, and top managerial positions in NTDC. Thus, the top management was reluctant to make important decisions, avoiding both ownership and responsibility for the posts they occupied. There were also too many decision-makers given the organizational structure of the sector. This would not be a problem in the presence of a strong regulatory authority but NEPRA had been without a chairman for about a year now and its role as a regulatory body epitomized poor management mainly attributed to incompetent and insufficient human capital.

Coordination among various federal departments and between provincial and federal departments needed to be improved. CCI as an overall governing body could be made more effective by defining clear Terms of References. Judiciary was another important actor as court's delay in decisions could indefinitely delay tariff determination impacting the whole sector. Given the ongoing and continuous process of litigation in the sector, it was important to improve the awareness of the court so that cases could be systematically organized and dispensed with according to their severity.

DISCOs played a central role in the power system. Thus, improved governance and management of DISCOs was critical in resolving the Circular Debt problem. This required that the quality of human resource in DISCOs was enhanced and its top leadership had the necessary corporate management experience rather than distribution engineering skills. Additionally, inconsistency in appointments in government institutions as well as lack of security of tenure further impacted the performance and productivity of the leadership as well as of the institution. Entities like LESCO had become notorious as their leadership appointment had become a game of musical chairs, and same was the case with the management and the Board.

What is required to improve the regulatory enabling environment? The Punjab Government representative stated that the sector was overregulated and there was a need to rationalize the various regulations in place to ensure the existence of an enabling environment for the private sector. This should include the rationalization of various laws including the colonial administration's Electricity Act 1910, the WAPDA Act, the NEPRA Act 1997 among others, and constitutional guarantees including the 18th Amendment that resulted in contradictory legal dispensations.

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There was a broad consensus among the participants for a shift from the single buyer model to the multiple buyer model. This required that initially the Central Power Purchasing Agency (CPPA), which was currently tasked as the sole purchaser of power be made independent of NTDC, followed by introduction of a multi-buyer culture, whereby a DISCO was able to directly buy power from a generation company. This arrangement was part of the roadmap when WAPDA was unbundled, however neither the license had been followed nor the power sector had matured to allow this transition. Thus other than regulatory allowance, DISCOs should be required to develop their expertise and resources to make the transition to a competitive market-based multiple buyer system, as a policy.

In the 18th amendment, electricity was made a federal subject with the implication that all provinces would have to follow the uniform tariff rule. The federation could not charge a different tariff from two different regions owing to political issues even though bill collection and losses varied across them. However, the participants argued for a differential tariff, so that each province or DISCO could charge a different tariff based on its own performance.

Is cost of energy linked to sector's governance or only to the energy mix? Cost of electricity against the affordability of the consumer was highlighted as one of the most important issues as high costs translating into high tariff of electricity only led to increased theft, a plague which was already extremely difficult to control. The current government's measures to control theft through police had not worked. Instead, there was a need to develop an integrated theft control strategy inclusive of Smart Meters, institutional accountability and better law enforcement mechanisms. Thus, the underlying energy mix, efficiency of GENCOs and DISCOs, and preferences in new

projects became important in the context of energy costs.

In terms of generation, while the efficiency level of IPP furnace oil plants stood at 38%, GENCOs including Jamshoro and Muzaffargarh instead ran at an efficiency level of only 25%. This gap could be bridged through competent management and rehabilitation of existing government owned plants. Similarly in terms of distribution, although NEPRA had given a directive to all DISCOs to conduct a technical losses evaluation study, only a few DISCOs had actually done the study while none had executed a plan to minimize the losses.

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Hydropower was without question the cheapest form of electricity production and thus should be given the highest priority. Though alternate energy sources like wind and solar should be part of the solution, there efficiency and cost needed be kept in mind in terms of planning. Solar plants utilized approximately 17% of the total plant capacity while wind power plants capacity factor was 28 to 30% depending on the wind corridor. Thus these sources were expensive in terms of cost and their generation seasonal.

It was also observed that the price of energy needed to be rationalized to incentivize efficient generation. For example, the cost of gas to boilers was cheaper than to Turbine Cogen which was 20% more efficient than boilers, thus inadvertently discouraging use of a more efficient technology.

Is privatization a panacea for energy security? The process of WAPDA's unbundling that began in 1994 conceived of private independent entities regulated by NEPRA. However, this process was stalled and currently these companies including DISCOs and GENCOs were more like subsidiaries of the Ministry of Water & Power rather than independent entities. The Secretary Water & Power and the head of PEPCO were known to give regular directions to DISCOs as if they were subsidiary businesses, and were deeply involved in appointments and postings, while the member of their BODs were also appointed on political basis by the Federal Government. Moreover, the employee union of DISCOs and GENCOs were still linked with WAPDA even though on paper, they were independent companies.

Participants were of the view that all DISCOs and GENCOs should be made private limited companies in the true sense, such that they were completely independent of PEPCO, and could take their own strategic decisions to improve their efficiency under qualified and competent leadership. But privatization required an effective and credible regulatory body as a pre-requisite.

What are the issues involved in starting new hydropower projects? Hydropower projects were critical in resolving Pakistan energy crises because of their low power production costs and because Pakistan enjoyed a huge hydel potential. For example, Azad Jammu & Kashmir (AJK) has a 9,000 MW potential for hydropower. Of this, 3,800 MW projects had been assigned to IPPs but few had actually been established. The participants raised the following issues regarding the underutilization of hydropower. One, IPPs were reluctant to invest in hydel power because it involved large and long-term investment as an average hydel plant took 6-7 years as compared to 2-3 years for a thermal plant. Thus, the state would have to invest itself rather than waiting for IPPs. Two, the federation must respect the constitutional guarantees of the provinces by paying them the obligated net hydel profit as its non-payment led to a lack of confidence among provinces. In case of AJK and Gilgit Baltistan which were not constitutional provinces, the centre should follow the same standards as of other provinces. Additionally, local people needed to be provided the first rights of water for irrigation and those displaced needed to be fully compensated for their property, and rehabilitated. Three, to fully tap the hydro power potential of the North, integrated planning including long term transmission requirements was required else there was a risk that transmission corridors would be blocked and become unable to bring power for future projects.

What are the issues involved in attracting private sector investment? A participant indicated that according to the Power Policy 2013, Pakistan needed about $80 billion investment in the next 10 years to fulfill its energy needs. In this regard, the participants agreed that while private investors may make investments in 200-400MW power

plants, the larger projects would have to be in the public sector domain. Thus, the role of the private sector should be enhanced by encouraging investments in smaller plants, and the following issues were articulated to facilitate this process. One, an approved integrated energy plan vetted by the regulatory body with suggested sites, would facilitate investors to make informed investment decisions by increasing the transparency of the system and shortening the approval process. Two, while the Board of Investments was able to bring private investors, still lack of a functional one-window operation led to impediments in the process as there was a disconnect between policies and institutions of the province and the center. Additionally, the center did not accept the letter of intent or sovereign guarantees of provincial government. Three, distributed responsibilities and lack of coordination between multiple institutions was a serious impediment for the investors as it made for a complex environment for project approval. Four, Wheeling was a mechanism by which a private party could produce power at one location and use it at another location. Although a Wheeling policy existed, NEPRA took a long time to process a Wheeling charge application while the DISCOs discouraged it all together, leading to its non-use. Thus, a decision on a blanket Wheeling charge calculation at all KV levels, which was approved by DISCOs and NTDC would spur investment by the private sector.

An assessment of existing initiatives by the Punjab Government: There was a detailed discussion on new projects announced by the Punjab government. The government representative argued that the pace of work on both the 1000 MW solar project and the Punjab Coal Initiative 2014 indicated the political will of the Punjab government to successfully execute the projects. The Punjab government had selected the sites, involved independent experts, and made every effort to coordinate with all departments and the power purchaser to implement the plan. But other participants highlighted the following issues suggesting that the Punjab government should instead follow well-thought out energy plans made by professionals and involve both professionals as well as departments in a consultative decision-making process rather than merely assigning them the responsibility of project implementation. One, for the 1000 MW solar project, the capacity factor was only 17% and a 220 KV network was required for power evacuation, which required a huge investment increasing the cost of generation. Instead, the global trend was to build small solar power plants of 10-15 MW in various locations and embed them in the distribution system. This way existing transmission and distribution system could be utilized. Two, the 1200 MW coal power plant in Sahiwal was poorly planned because it would require 50 trains per day to transport coal from the coast, which the current railway system and port facilities would be unable to support. Additionally, the cost of diesel would also push up the basket price. Instead, a coal power plant at Gadani was the practical option as power could be generated at the coast and transmitted through the network.

List of Participants

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