

Short-, medium-term economic challenges – IV

Page NO.20 CoINO.03

Waqar

Masood

Khan

We now discuss whether there is an excess capacity in the sector and what kind of challenges in transmission and distribution system are currently faced. We also address the subject of cost of electricity to consumers and ways to bring it down.

We begin by looking at the generation capacity and see whether it is adequate and what should be its growth going forward. As on June 2013, the installed capacity in the country was 23663MW and actual generation was 99 TeraWh, leaving a gap of about 6500MW in the country. There were serious law and order conditions as people faced punishing blackouts and were forced to take to the streets during the month of May when elections were held. The new government had its chief objective: addition of new power on fast track basis. In five years, the installed capacity was raised to 28399MW (June 2017), an addition of close to 5000MW to the national grid, and the peak load-shedding fell to about 1000MW. Total generation was recorded at 121 TeraWh, showing an increase of 22% in four years. Another addition of 5000MW is in the pipeline through various projects at different stages of completion. This is a very good addition to power. Compared to 2013, availability of power is not the issue hurting people and when the Prime Minister made his three speeches after the victory, load-shedding was not the issue

Unfortunately, the additional power brought into the grid nearly suffers the same affliction that was associated with the burst of power under 1994 and 2002 IPPs policies. Most of the new power is based on imported fuels like coal and LNG. With the rising international prices of oil, in the coming days the country would again face rising electricity prices. On both occasions (1994, 2002) the approach was justified on account of shortage of time to do anything else and each time after we were done, a hue and cry was raised that the country has contracted excessive power.

In the backdrop of the propaganda of excess power, two things happen. One, it ensues complacency that prevents regular additions to power until such time that a new wave of shortages grips the country pushing again for selecting options not from the point of view of optimal economics but expedient induction to overcome the crisis. Second, the long-term exploitation of country's vast hydro, solar and wind resources, some of which require long gestation periods (hydro) and development of allied infrastructure (solar and wind) remains a distant dream as such projects are pushed aside in favour of quicker solutions.

There are two significant issues that continue to bedevil the power sector. First, it is the

inadequacy of the infrastructure to support the existing base of power. The number and capacity of transmission lines is not in line with the amount of power to be transmitted. The classical example of this mismatch is the new imported coal-based power project at Bin Qasim which gets dispatched through the Hub-Jamshoro connection when it is not doing transmission from Hubco, for which it was made as a dedicated-line. Apart from this, there are serious problems with the efficiency of both transmission and distribution systems. One indicator of this inefficiency is the capacity costs being incurred by the transmission and distribution system. In 2016-17, the capacity payments were estimated at Rs 4.1 per unit, a significant increase of 11% from Rs 3.7 per unit a year earlier. This means as capacity is being added, energy sold is not keeping the same pace of increase. Nepra has estimated that to keep the capacity rate at Rs 4.1 per unit, the energy sold would have to be increased by 30%. This is a near impossibility because of the system has supported an increase in energy of only 22 percent in the last four years. The growth in energy sold would be no more than 10 percent, which would entail a capacity payment cost of Rs 5 per unit. Therefore, going forward, cost of electricity would increase for no other reason but that the system cannot sell enough power to reduce the average capacity payments or to keep them constant.

Another indicator of inadequacy of the system is the overloading of transformers, and feeders. On a countrywide basis, 36.82% of total transformers were overloaded. Some of the Discos (FESCO-QESCO) had more than 50% overloaded transformers. Regarding the feeders, the figure was 29%, while in some Discos (PESCO and TESCO) more than 50% are overloaded. A similar situation is observed in the case of distribution transformers. Furthermore, the number of outages and their durations has been on the rise.

The system losses also point to a stagnant performance. With minor improvements, the losses have varied between 18-19 percent in the last four years, which is a phenomenal loss of national resources. Without commensurate increase in the T&D infrastructure, there is no hope that the country would experience orderly and cost-effective functioning of the power sector.

Second, the cost of electricity would not be coming down in the near future unless we look at some out-of-the-box solutions. The share of imported energy (based on imported fuels) is more than 60 percent, and so long as this is not drastically altered in favour of indigenous fuels/resources, the hope of cheap electricity would remain distant. To this end, we recommend that there should be immediate discontinuation of any further investment in the thermal power (except perhaps on local gas dedicated to the plant). On the other hand, the entire focus should be shifted toward renewable energy. The cost of technology for wind and solar has come down to a level that no thermal power (excluding nuclear) could match its economics. Both kinds of projects can be put up within a timeframe that is shorter than that of thermal power. Thousands of megawatts can be put up within a short period of time.

The other type of power is hydro, which would be the most economical but would take longer time to implement. In fact, given its long gestation (on average, a minimum of 15

years from the issue of LOI), hydro power projects should be allowed under a reformed approval framework, virtually without putting a limit as the future increase in demand would continue to absorb such economic additions to national grid. In fact, a careful analysis would reveal that the economics of bringing new renewable energy would be more feasible even if it requires to replace some thermal power by continuing to pay their capacity charges (which have been substantially reduced already after repayment of debts for IPPs of both 1994 and 2002 policy).

Finally, let us reflect on the myth of excess power in the country and consequent refusal of previous Government to admit renewable energy projects in its closing days. Pakistan has per capita consumption of 471 Kwh - almost half compared to 806 Kwh in India. On the other hand, there are countries consuming as much as several thousands (highest 23,000 Kwh in Norway with the average of 8800 Kwh among high-income countries, 2064 Kwh for middle-income countries). The potential gap or suppressed demand for electricity in the country is phenomenal. Hence the argument of excess power is nothing but a throwback to the old school of thought that believed to keep shortages and earn economic rents by selectively distributing the limited supplies. In this regard, the best example is to consider: What was the state of telecommunication sector in the country before its opening to competition? Two decades ago, the most cherished patronage politicians would distribute was a telephone connection. If the private sector had not expanded supplies, the country would not have crossed a figure of total connections to more than 10 million, whereas it is 120 million at present. Accordingly, there should be no concern for excess availability of power. That day is too far off. But expansion in the T&D infrastructure is as much a need as adding more power otherwise the power sector would remain unstable.

(The writer is former finance secretary)

