

The Three Pillars of a Viable Power Sector!

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The power crises has catapulted the power sector to the forefront. Every body is talking about it's working and also advising the government as to what needs to be done. Most of the arm-chair experts talk about some missing power policy and that necessary resolve is not evident. Some of the more brave advice that alternate energy should be tapped with wind and solar swinging the fates in our favour. Though freeing ourselves from oil and gas is an important requirement, the various pre-requisites to induction of alternate energy and the needed financial depth is normally swept under the carpet. That the base load requirements and those pertaining to peaking demands are two different realms needing different solutions is also conveniently forgotten. There is thus a need to dilate upon the subject and explain the various facets of a viable power sector. **And in order to do so, we will concentrate on the generation, the fuel and the customer mix alone** – incidentally, the basic parameters of any viable power sector.

Going back to 1976, when Tarbela was commissioned and which added a hefty 3600 MW to the national tally, we see that the then hydel-thermal ration drastically changed and improved in favour of hydel to 80:20. The record tells us that the 20% thermal generation too was basically fueled by gas and thus was not burdening the customers much. Unfortunately, this trend which stabilized at 70:30 in favour of hydro-generation has since changed for the worse and the generation mix now stands at 30% only for the hydel component with 46% of the rest using RFO as the fuel against just 5.6% world average. The small usage of gas, coal and nuclear fuel does not seem to list the balance away from expensive oil.

As presently, the hydel tariff being changed by WAPDA is Rs.1.18 per unit while the same for RFO fired thermal units can be above Rs.15.00 on the average, one can imagine the negative effect the changed ratio would have on the price of electricity. However, one thing is for sure – the generation mix has to necessarily change in favour of hydel plants. On the other hand, as hydel generation depends upon the completion of long gestation projects, which too are subject to many a wrangling in the Pakistani context, we will have to come-up with some other solution in the short run and concurrently work on hydel projects in the long run. The answer lies in the improvement of the fuel mix for the thermal plants. This would be a change from the present pre-dominantly RFO usage to gas in the first instance (for about 2-3 years) and eventually the needed transfer to coal, which can be indigenously mined or of the imported variety. According to financial experts, changeover from RFO to gas for about 3000 MW of thermal generation (at Jamshoro,

Muzzafargarh and KAPCO plants) would reduce the cost of generation by at least Rs.6.00 per unit with an accumulative positive effect on the yearly expenditures of PEPCO by upto Rs.75 billion. The needed volume of gas can be made available as part of a national policy. And as this is only destined to be specially made available for 2-3 years, concurrently efforts have to be made to convert all the thermal plants, both in the public and the private sectors, to coal. This can be done through PSDP funding, the public private partnership (PPP) mode or simply through garnering of the supplier's or the buyer's credit for conversion equipment (including EPC contracts). All of these ways of conversion are doable and can be taken up through a consensus of the experts.

The third of the pillars pertains to the issue of the lopsided customer mix, which the utilities have to face at the moment, having a burden of Rs.50 billion or so. As it is simply detrimental to the financial stability of the utilities, the issue is of equal importance in comparison to the negative generation and fuel mix. It is seen that at present out of the total 19.662 million customers of PEPCO, a hefty 9.3 million customers can in a way, be categorized as the life line customers. These customers use upto a maximum of 100 units per month and are being charged at very low rates in comparison to rest of the customer base.

The present tariff for the 1–50 units usage category is just Rs.1.87 per unit, while the 1–100 units usage would allow the DISCOs / KESC to bill the customers at the rate of Rs.4.36 per unit. Imagine the level of these rates in comparison to the calculated cost of service which at present is a little above Rs.10.00 per unit on the average. In other words, cross-tariff and general subsidies pay for the sustenance of the utilities and to do away with the burden of this group of customers and thus it is extremely onerous for the utilities. As the subsidies do not fully cover the gap, the loss has to be borne by the distribution companies or have to be passed on the other categories of customers in shape of enhanced tariffs. Unfortunately, this category of customers is on the increase due to heightened rural electrification and unplanned urbanization through what is known as the Kachi Abadies.

The question arises as to why should the socio-political obligations of the governments be made to burden the utilities. As such, the requirement is to bill all the customers at a uniform rate – at least for the domestic, the commercial, the industrial and the agriculture categories. Consequently, the present load suppression model of tariff formulation has to be scrapped and instead the more you use, the less you pay model has to be accepted as the rule.

On the other hand, because the less endowed customer too has to be taken care of, the group can be supported through targeted subsidies. Power stamps similar to food stamps of the yesteryears and those in vogue in the developed world and specifically the USA can also be issued. In other words, the utilities would issue regular bills to all customers including the life line category and at the time of payment, the power stamps can be redeemed at the banks. The huge data bank collected for the BISP through the poverty survey can easily be used to assist the life line customers in getting the subsidies. In this manner, both the customers and the utilities can benefit.

Through the above measures, all the three basic pillars of a healthy power system / sector can be strengthened – otherwise, we will not be able to tackle the ongoing power crises and nor would the sector be able to deliver. In fact, spoiling of the generation, the fuel and the customer mix is the reason for high power tariffs in the country. Capacity shortages is another story needing separate space to dilate upon.

Quotations

- The secret to a long life is to stay busy, get plenty of exercise, and don't drink too much. Then again don't drink too little
Hermann Smith-Johannson, at age 103
- Anyone stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young.
Henry Ford
- The first forty years of life give us the text, the next thirty supply the commentary.
Anthony Schopenhauer
- When good men die, their goodness does not perish.
Euripides
- I am ready to meet my Maker. Whether my Maker is prepared for the ordeal of meeting me is another matter.
Winston Churchill
- If you are afraid to die, you will not be able to live.
James Baldwin
- Remember that the most beautiful things in the world are most useless; peacocks and lilies, for instance.
John Ruskin
- Whatever's begun in anger ends in shame.
Benjamin Franklin
- Constant attention by a good nurse may be just as important as a major operation by surgeon.
Dag Hammarskjöld
- Look to your health, and if you have it, praise God, and value it next to a good conscience; for health is the second blessing that we mortals are capable of; a blessing that money cannot buy.
Izzak Walton
- One must eat to live, not live to eat.
Moliere
- People who drink to drown their sorrow should be told that sorrow knows how to swim.
Ann Landers
- Character is the result of two things – mental attitude and the way we spend our time.
Elbert Hubbard
- What's the difference between a stumbling block and stepping stone?
The way you approach it.