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## Preamble

- Circular debt has been with us for 12 years. Pakistan has suffered huge losses (cumulated loss of more than Rs 5 trillion). We tend to hide behind the term circular debt without any clarity.
- Pakistan has lurched from an excess demand to excess supply of energy and has whimsically played around with the energy mix. While the world is moving to renewables we are investing heavily in coal.
- We need to design a system where losses costs are minimised to produce energy competitively. Where prices are not made volatile by arbitrary taxation and regulation works for the poor. We need a competitive electricity market with minimum government interference.
- The sector experience shortages not due to lack of supply, but mostly because of the financial issues of the distribution companies (DISCOs). Weak governance and mismanagement are prevalent in the distribution sector.
- There is no clarity on how the energy sector is being regulated; whether we have state of the art pricing frameworks. NEPRA is the regulator, yet the final decision-making is done at the energy ministry.

## I. Circular Debt- An Unfortunate Misnomer

### *Challenges*

- Circular debt is a power sector deficit; shortfall in inflows and outflows at the CPPA-G.
- It is because of inefficiencies, delays in tariff determination/ decision-making, taxation issues, administrative and governance issues.
- It is huge and increasing as there is no serious effort to curtail it. The only effort government made over the years is to increase consumer tariff; which in itself is distortionary.
- Uniform tariff and subsidies act as a disincentive for DISCOs to improve efficiency.
- Instead of increasing sales to minimise the impact of huge capacity payments, DISCOs have started revenue-based load shedding.
- There are no performance contracts with energy companies.

### *Way Forward*

- Empower NEPRA to notify differential tariffs. The government must cover all costs not covered in tariff through subsidy.
- Power sector policies should be linked with the monetary policy and exchange rate policy.
- De-politicise the DISCOs and allow an independent board with professionals as its members.
- Experts are required in the sector to understand the underlying issues and take appropriate steps in time.
- Coordination between Federal, Provincial and Local governments is required to resolve the outstanding recovery issues.
- Smart technologies can be used to control non-technical losses.



## II. Energy Investment & Planning

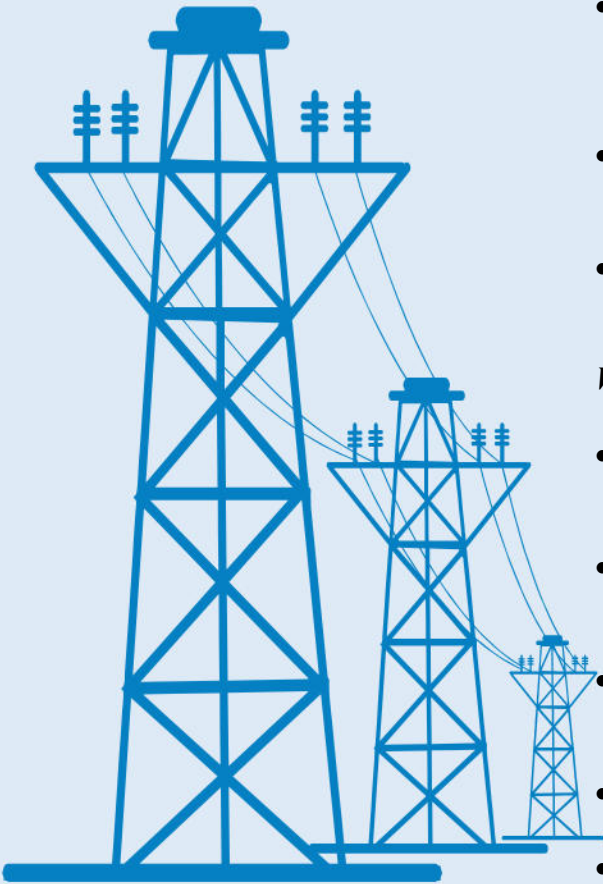
### *Challenges*

- Absence of competitive bidding and non-transparent power procurement process has brought structural rigidity and hindrances to the creation of a competitive market.
- Generation sector did attract private investment but get stuck in the cost-plus model. Guaranteed capacity payments have increased the cost of generation.
- Decision-makers have always chosen short term fixes to avert crisis instead of a long-term well thought out strategy. Political expediency and short term goals resulted in long-term contracts; the end result is high prices for the consumers.
- The focus in planning strategies is on expanding generation capacity, with little focus on improving the energy mix and energy efficiency.
- Planning for generation expansion is based on only peak demand forecast, which is sometimes misleading. There is lack of spatial forecasting. That's why investments to increase generation capacity are not complemented by equivalent investment in downstream transmission & distribution infrastructure.
- There is disconnect between various govt. departments \_ leading to inconsistencies and less than optimal planning and decision making.
- Our energy planning strategies ignore the holistic view and focus only on the power sector. There are institutional disconnections and fragmentation in the priority of issues.
- If planning objectives are clearly stated, then there is a problem of implementation.
- Planning is done for the existing consumers and not for those who are un-served or under-served.

### *Way Forward*

- Distributed generation is the solution for those who are un-served or underserved.
- An integrated power sector planning is required. This approach must include accurately forecasting demand, adding generation capacity, improving transmission and distribution systems, increasing efficiency and bringing costs down and ensuring sustainability.
- We need good urban planners along with energy experts for energy planning.
- Coordination should not be limited to the energy sector, but serious consultation with other sectors as well.
- There is need for capacity building at the individual as well as at the institutional level.
- Policy-makers/ planners should have an understanding of the complex economic, political and environmental interrelations and uncertainties surrounding energy systems.
- Market liberalization with private participation is an optimum solution provided accompanied by effective regulatory apparatus.
- Two parallel energy infrastructures are not financially viable. Move towards a single source of energy for every sector, in particular for the domestic sector.

### III. Developing Electricity Market for Future



#### *Challenges*

- The electricity market is complex; it requires legal, financial and human capacity at every level. It requires healthy participants.
- We have moved from vertically integrated to the single-buyer model but so far failed in developing a wholesale market. There are private participants in the generation, but no competition due to guaranteed long-term contracts.
- Political and bureaucratic capture is so strong that it resists change. This capture discourages healthy participants to take part in the market and compete.
- Power sector (at present) do not satisfy the pre-requisites of a wholesale market.

#### *Way Forward*

- Existing generation needs to be broken down into smaller entities to minimise the generation complex in which we are currently locked.
- The sector needs to be financially viable first. Power sector with losses does not allow the market to move forward smoothly.
- Wheeling is the first step to move towards a wholesale market. Simplify wheeling of power that will be the prelude to efficiency and market development.
- NEPRA needs to ensure bilateral contracting and does not allow any entity to create hurdles in it.
- NEPRA allows generation plants with new equipment; if this condition is removed, generation costs will come down automatically, and these plants will also be available for competition.
- Competitive bidding (in future) requires a bidding plan. Without a bidding plan, market cannot be developed.
- We need professional management throughout the supply chain.
- We need compliant consumers\_ universities, media and other community institutions can play a role in creating awareness among consumers.
- Distributed generation offers avenues to create competition in the retail market.

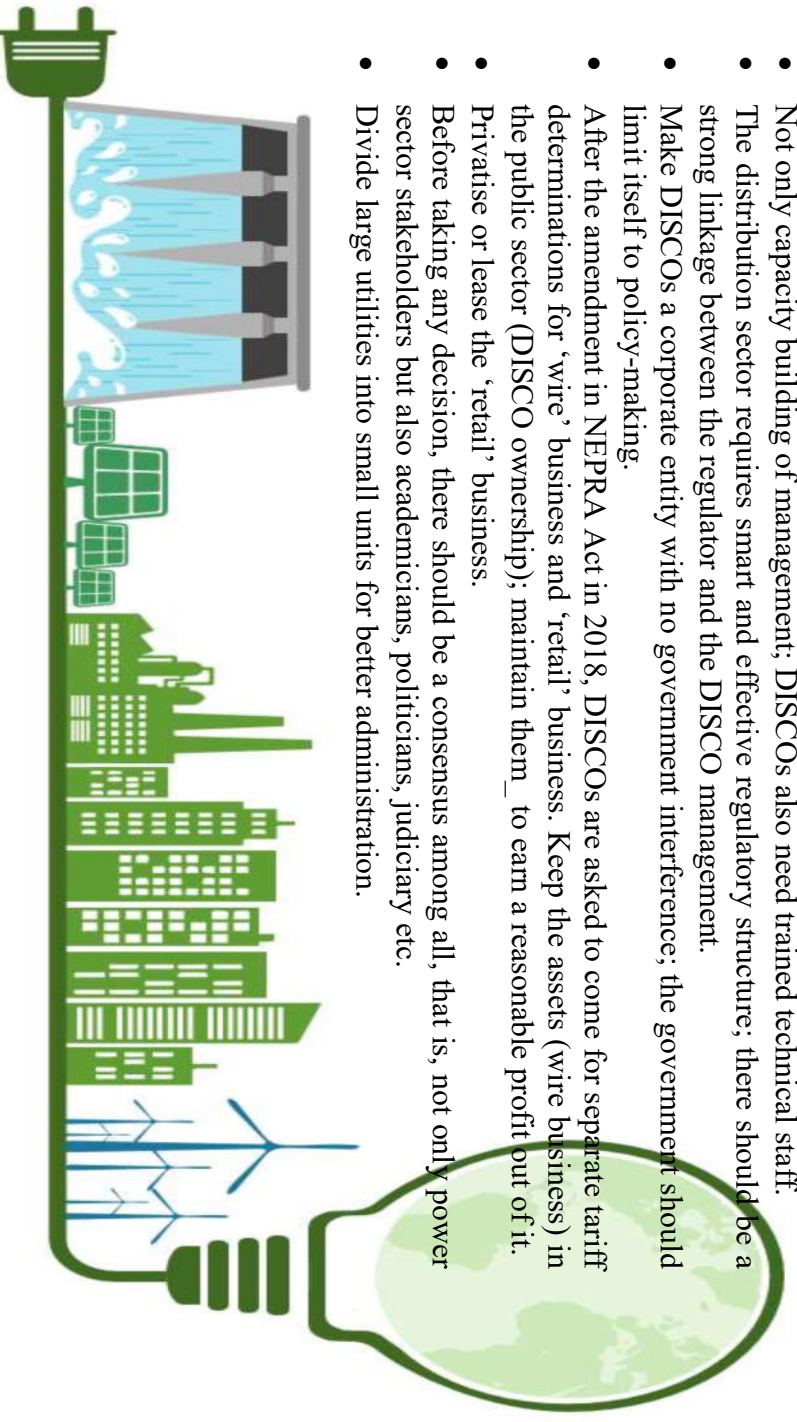
## IV. Reforming Electricity Distribution Companies

### Challenges

- Mismanagement and governance issues.
- DISCO employees (management) after corporatisation are company employees but they are still treated as government employees and get transferred quite frequently.
- In the DISCO boards, there is hardly any expert to guide DISCO management.
- DISCOs are not independent to take decisions; even for minor purchases, they need approval from the power division.
- For determining the sector's performance the focus is only on two key performance indicators (KPIs), i.e., transmission and distribution losses and recovery rates; no consideration is given to reliability or sustainability of supplies to end-consumers.
- Though there is a difference among DISCOs based on two main KPIs used; when viewed in terms of sales volume, there is not much difference in performance.
- DISCOs performance is less to do with CEO incompetence and more to do with the socio-political environment, in which the company operates.
- Disharmony between federal and provincial governments is also affecting the efficiencies in the DISCOs.

### Way Forward

- Appoint experts on the boards of DISCOs and empower them to take tough decisions; make them accountable for their decisions.
- Invest in energy loss reduction programmes, distribution infrastructure and grid augmentation.
- Invest in human resources to build the capacity of DISCOs.
- Not only capacity building of management; DISCOs also need trained technical staff.
- The distribution sector requires smart and effective regulatory structure; there should be a strong linkage between the regulator and the DISCO management.
- Make DISCOs a corporate entity with no government interference; the government should limit itself to policy-making.
- After the amendment in NEPRA Act in 2018, DISCOs are asked to come for separate tariff determinations for 'wire' business and 'retail' business. Keep the assets (wire business) in the public sector (DISCO ownership); maintain them to earn a reasonable profit out of it.
- Privatisise or lease the 'retail' business.
- Before taking any decision, there should be a consensus among all, that is, not only power sector stakeholders but also academicians, politicians, judiciary etc.
- Divide large utilities into small units for better administration.





### **Challenges**

- Our pricing system is based on load suppression model. This model was introduced when there was a shortage of energy and social welfare system was in place. After reforms, it should have changed, but we are continuing with it.
- In the generation cost-plus tariff, there is a lot of scope for improvement. But over the years, NEPRA has not come up with some good cost-plus formula.
- Both NEPRA and the government are responsible for the recent long term contracts with capacity payments. In 2005, NEPRA came up with power procurement regulation, which has no provision for long-term contracts. NEPRA has a strong advisory role under the law, but unfortunately, it is not exercising.
- NEPRA neither has the capacity nor the authority to take decisions which are assigned to it under the law. Similarly, NEPRA does not have the authority to check the inefficiencies of the DISCOs, as they are not independent corporate entities. They are under government control.
- The regulator does send an advisory to the government on various issues but is incapable of asserting its authority.
- After the amendment in NEPRA Act, 2018, a new law is in place. But how it is going to be implemented is not clear.

### **Way Forward**

- Our energy law making or policy making is flawed. It should be transparent and done after thorough consultations with all the stakeholders and local experts who understand the ground realities; and not at the behest of donors.
- For consumer tariff, the regulator must determine the actual cost of supply, which thus far has not been done effectively.
- Now there is excess capacity and the issue of capacity payments, there is a need for a new pricing regime, like for instance, the more you use the less you pay. This will encourage demand and also solve the issue of huge capacity payments.
- If nothing is done to lower consumer tariffs, people will eventually move towards other solutions, that is, renewables. This will have a devastating impact because of huge capacity payments.
- There is no simple solution to a complex power sector issues in Pakistan. It is the job of the regulator to come up with a new innovative formula that worked well for the sector as well as for the overall economy.
- NEPRA needs reform\_ builds its capacity to play a role more effectively in the power sector, just like SBP is doing in the banking sector. NEPRA should act as people's body and not as a government entity.

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