Contours of Energy Crisis and Energy Security of Pakistan
• The Economic Survey of Pakistan recognizes that during 2012 around 2 percent of gross domestic product (GDP) was lost due to the power sector outages.

• The petroleum crude and products contributed to a third of total imports of Pakistan during 2012

• The transmission and distribution (T&D) losses were valued at PKR 140 billion in 2012

• Issues being currently faced can be categorized into policy, governance, technical and cost issues
Sequence of Discussion

• Short-term situation analysis
• Limiting analysis to power sector
• Assumptions:
  – It will be difficult to attract investment
  – It will be difficult to bring legislative changes
  – Will be difficult to change governance structures at generation and distribution companies
• What lies ahead?
Circular Debt in Power Sector

PKR Billions

Source: Planning Commission 2013
Steps that were promised

- Integrated Energy Policy
- Consolidate fragmented energy governance
- Build capacity of regulators
- Deregulate energy sector further
- Reforms for attracting investment in energy sector
- Make generation efficient
- Reduce transmission losses
- Hydro, Coal and other sources
These may be symptoms but are not causes of crisis
3 key causes

- Unwillingess to pay the price of energy
- Administrative and line losses
- Political stubbornness to maintain subsidies
1. Unwillingness to pay for power

- Willingness and ability to pay for power
- Recoveries of some very large power distribution companies have deteriorated over time
  - In Hyderabad, for example, only 60% of the power supplied in 2012 was paid for – in a city of over 6.5 million people
- DISCOs are unable to adopt the normal commercial practices in other countries of disconnecting customers for non-payment because of unclear legislation and political pressure.
Will households pay if power cuts are eliminated and tariff is increased by 10%?

- Yes, 12%
- Don't Know, 6%
- No, 82%

Source: SDPI Survey Unit 2013
2. Political stubbornness to maintain subsidies

• The fundamental rationale for subsidising electricity tariffs is to augment the paying capacity of the poorest of poor

• However once subsidies are provided across the board, people start to demand them as their right and politicians feel compelled to maintain this distortive fiscal burden to win popularity.

• Do poor really get power subsidies in Pakistan
  – Domestic lifeline consumers (1-100 units) only get 0.3% subsidy
Subsidy by the government on power consumption (Rs/kW)

<table>
<thead>
<tr>
<th>Category</th>
<th>LESCO</th>
<th>GEPCO</th>
<th>FESCO</th>
<th>MEPCO</th>
<th>HESCO</th>
<th>SEPCO</th>
<th>QESCO</th>
<th>PESCO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Residential, &lt;700 units</td>
<td>0.4</td>
<td>1.4</td>
<td>1.4</td>
<td>2.9</td>
<td>3.9</td>
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<td>2. Industrial, (66.132 KV &amp; above) -</td>
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<td>TOU (Peak)</td>
<td>2.1</td>
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<td>6.6</td>
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<td>3. Agricultural, 5 KW &amp; above -TOU</td>
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</tbody>
</table>

Source: Economic Survey of Pakistan, 2013
Electricity Shortfall & Subsidies

Source: NEPRA and Planning Commission 2013
3. Administrative & Line Losses (Theft)

- In August 2013, the Secretary of Water and Power Ministry informed the Senate Standing Committee that
  - Pakistan loses annually PKR 150 billion (USD 1.7 billion) in line losses and power theft.
  - Until August 23770 cases of theft were registered and under trial
  - But only 3 cases were punished. Moreover, the fine imposed was under PKR 5000 in each case.

- Lacunae in the accountability mechanism. This requires amendments in Pakistan Penal Code so that there is certainty of effective punishment in cases of power theft
Power T & D Losses (% of output)
Do you know of power theft in your area?

- Yes: 35%
- No: 59%
- Don't Know: 6%

Source: SDPI Survey Unit 2013
Hopes from National Power Policy

Tariffs and Subsidies

Creating Competition in power sector

Curbing Theft
All subsidies (including hidden and cross subsidies) - except a 100 unit lifeline block - should be phased out over the next 24 months.
2. Curbing Loses

• Unaccounted-for-gas controls should be enforced and the saved gas diverted to the power sector. The power ministry notes that just a 10 percent diversion can produce an extra 2000MW.

• Performance contracts for grid stations under National Transmission and Dispatch Company.

• Performance contracts should also be introduced for DISCOs. Such a contract should have specific clauses on reduction in distribution losses and full collection of receivables from consumers.

• Accountability at XEN-level
  • Role of provinces
  • Social accountability tools
3. Creating competition in power sector

- Creating competition on distribution side is important but a medium to longer term option

- What about creating competition in generation sector?
  - The allocation of fuel to generation companies (GENCOs) should be linked with their efficiency levels
  - If the Independent Power Producers (IPPs) are better performing in efficiency terms then fuel allocation may be in favour of IPPs
  - According to Ministry of Water and Power’s own estimates a 4000mtoe shift from GENCOs to IPPs will save PKR 77 billion annually
  - The current generation comparison reveals that PKR 13 billion per month for GENCOs allows production of 650 MW and only PKR 10 million per month in case of IPPs produces 1150 MW.
Can I get cheaper power?

**Efficiency**
- **Automation**
  - Systems optimization of transmission
  - Automated grievance redressal system
- **Transparency**
  - Allocations based on efficiency
  - Optimize dispatch and payments
  - Tariff encouraging efficiency
  - Move from high to low cost power contracts
- **Accountability**
  - Intolerance for corruption
  - Results-based management
- **Professionalism**
  - Competency based hiring
  - Performance contracts
  - Speedy collections

**Competition**
- **Enabling Infrastructure**
  - PPP projects in coal & hydro
  - Redefine national grid
  - Strengthen transmission
  - Build regional (trade) transmission
- **Tariff Ceilings & Competitive Bidding**
  - Strengthen regulatory authority
  - Upfront tariff for low cost fuels
  - Bidding for competitive cost
  - Privatization of government assets
- **Key Client Management (KCM)**
  - One window operation
  - KCM teams at Ministry of Water & Power

**Sustainable Power**
- **Low Cost Energy**
  - Tariff Rationalization
  - Reduction of cost by changing energy mix
- **Fairness**
  - Preferred gas allocation for power
  - Same cost of power to industry (Gas Vs. WAPDA)
  - Protecting poor
- **Demand Management**
  - Smart metering
  - Green star (technology) compliance
  - Energy efficient building standards
  - Subsidize low cost renewable energy
Who will do it?
Who will do it?

- Autonomy at regulatory institutions?
- Capacity at power ministry?
- Planners at Planning Commission?
- Empowering Boards at power companies
- Defining limits of government in power sector
Thank You