Portfolio Management: The Post-Restructuring World

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Energy Foundation PM Workshop
The Big Picture

- Retail Competition isn’t working very well
  - Most all customers are on default service
- Investors are shunning power plant investments
- Wholesale markets have been
  - Too volatile
  - Riddled with market power problems
  - Have not demonstrated ability to develop new power when and where needed – Resource Adequacy
- Economic value has been lost from failure to integrate energy efficiency throughout electric system (G,T&D)
Needed Policy Response

- Stop pretending retail service is competitive
- Assign duty to acquire a longer term, diverse resource portfolio to distribution company (or other entity)
- Put Energy Efficiency back in the picture as a resource
- Reconnect SBC $ to economic analysis
- Try to improve use of emerging wholesale markets through competitive bidding
Elements of Portfolio Management

- End Use Forecast – short, med & long run
- Survey of supply and demand options
- Cost analysis of option
- Risk analysis
- Optimization of resources
- Acquisition
- Rate design consistent with cost and risks
What Actions are States Taking?

- California – portfolio management assigned to stand alone distribution companies
- Montana – portfolio management for default service by distribution companies
- Arizona – portfolios with contracts of diverse length, efficiency and renewables come first, then disco shops for supply side
- Arkansas – restoration of what looks like IRP with emphasis on competitive purchases in wholesale markets
Familiar old risks
  – Fuel cost increase
  – Capital cost increase
  – Economic conditions/ demand for product
  – System reliability
  – Environmental costs
  – Abnormal weather events
  – Adequate capacity
New Risks

➢ New Risks in Competitive Markets
  – Market price volatility
  – Market manipulation
  – Resource Adequacy

➢ Default Service Risk
  – Having all load subject to same/ or nearly same contract period

➢ System Security/Terrorism
Diversification

- Don’t want all the eggs in one basket
- Diversify
  - By length of commitment
  - By amount of load subject to any single arrangement
  - By resource type
  - By use of Financial as well as Physical assets
Risk Management Options

- Long Term Portfolio – 15+/- year outlook
- Multiple, overlapping arrangements
- Diversified Resources
  - Contracts for output of plants (varied lengths)
  - Ownership of power sources
  - Energy Efficiency (Reduce volatility of demand)
  - Renewable resources (No fuel cost, low enviro risk)
- Hedges
  - May be financial and/or physical
  - Need to turn into physical asset at some point
  - Unlike other commodities, we can’t tolerate shortages
## Sample Portfolio

<table>
<thead>
<tr>
<th>% Forecasted Need</th>
<th>Commitment Length</th>
<th>Resource Time Frames</th>
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</thead>
<tbody>
<tr>
<td>10%</td>
<td>Spot Market</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>2 year</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>4 year</td>
<td>efficiency</td>
</tr>
<tr>
<td>20%</td>
<td>6 year</td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td>8 year</td>
<td></td>
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<tr>
<td>10%</td>
<td>10 year</td>
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</tr>
<tr>
<td>10%</td>
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<td>renewables</td>
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<tr>
<td>5%</td>
<td>20 year</td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>30 year</td>
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Regulators Role in PM

- Public Review of:
  - End use load forecast
  - Risk and cost analysis
  - Resource selection
- Decouple utility’s profits from sales
- Pre-approval of action plan (2-5 year)
- Set rates