Session Two: Transmission Expansion in Restructured Electricity Markets

Harvard Electricity Policy Group
Thirty-ninth Plenary Session

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Boston, MA
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Entergy Background

- Control Area (CA) Peak Load approximately 22,000 MW
- Entergy generation – 22,500 MW
- Merchant generation – 17,000 MW
- 15,500 miles of transmission lines
- Retail electric service to 2.7 million customers
Entergy has continued to invest in the transmission grid

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>Total 5 yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans O&amp;M Expense</td>
<td>87,165,672</td>
<td>91,277,965</td>
<td>87,255,034</td>
<td>91,811,352</td>
<td>97,849,825</td>
<td>455,359,848</td>
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<tr>
<td>Dist Sub O&amp;M Expense</td>
<td>8,268,149</td>
<td>17,186,552</td>
<td>18,298,146</td>
<td>20,096,831</td>
<td>10,621,450</td>
<td>74,471,128</td>
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<tr>
<td>Total Trans Business O&amp;M Expense</td>
<td>95,433,821</td>
<td>108,464,517</td>
<td>105,553,180</td>
<td>111,908,183</td>
<td>108,471,275</td>
<td>529,830,976</td>
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<tr>
<td>Trans Capital Additions</td>
<td>154,659,918</td>
<td>148,620,717</td>
<td>172,960,196</td>
<td>270,681,530</td>
<td>205,314,373</td>
<td>952,236,734</td>
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<tr>
<td>Dist Sub Cap Adds</td>
<td>53,003,294</td>
<td>68,171,965</td>
<td>96,904,016</td>
<td>59,122,978</td>
<td>73,331,160</td>
<td>350,533,413</td>
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<tr>
<td>Total Trans Business Capital</td>
<td>207,663,212</td>
<td>216,792,682</td>
<td>269,864,212</td>
<td>329,804,508</td>
<td>278,645,533</td>
<td>1,302,770,147</td>
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<td>IPP (Reimbursement CIAC)</td>
<td>13,045,471</td>
<td>102,616,676</td>
<td>58,559,980</td>
<td>(28,735,924)</td>
<td>(7,571,865)</td>
<td>137,914,338</td>
</tr>
<tr>
<td>Total Trans Bus Cap. (incl CIAC)</td>
<td>220,708,683</td>
<td>319,409,358</td>
<td>328,424,192</td>
<td>301,068,584</td>
<td>271,073,668</td>
<td>1,440,684,485</td>
</tr>
<tr>
<td>Transmission (O&amp;M + Cap)</td>
<td>254,871,061</td>
<td>342,515,358</td>
<td>318,775,210</td>
<td>333,756,958</td>
<td>295,592,333</td>
<td>1,545,510,920</td>
</tr>
<tr>
<td>Dsub (O&amp;M + Cap)</td>
<td>61,271,443</td>
<td>85,358,517</td>
<td>115,202,162</td>
<td>79,219,809</td>
<td>83,952,610</td>
<td>425,004,541</td>
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<tr>
<td>Total Trans Business (O&amp;M + Cap)</td>
<td>316,142,504</td>
<td>427,873,875</td>
<td>433,977,372</td>
<td>412,976,767</td>
<td>379,544,943</td>
<td>1,970,515,461</td>
</tr>
</tbody>
</table>

Almost $2 Billion Spent in last five years!!
Historical Drivers for Transmission Expansion

- Reliability projects
- Load growth
- Load redistribution
The company has continued to invest in the system for reliability and load growth

- **Western Region** - Construction of the China – Porter 230 kV line increased Western Region LSC for the 2005 summer by approximately 200 MW

- **Amite-south** - Upon completion of the Conway – Panama 230 kV line, Amite South Import Capability will increase approx. 350 MW

- **Downstream of Gypsy** - Upon completion of the DSG Phase II projects, DSG load serving capability will increase approximately 450 – 500 MW
Newly evolving drivers for Transmission Expansion

- Generator Interconnection
- Firm PTP and NITS service
- Economic projects
The merchant activity in the Entergy region has resulted in a demand for more transmission capability

- 17,000 MW of merchant plants added since 1998
- Transmission often an afterthought when siting new units
- Very few have asked for Firm Transmission Service
There has also been a dramatic increase in wholesale activity on the Entergy System.
Entergy has been a staunch supporter of Participant Funding to address this issue

• The SeTrans proposal included a Participant Funding protocol
  – Awarded Financial Transmission Rights to parties that expanded the transmission system

• In light of the suspension of the SeTrans effort, Entergy has proposed a similar “beneficiary pays” pricing policy in the context of our ICT Proposal
The ICT proposal is a continuation of Entergy’s efforts to promote greater independence and transparency in the provision of Transmission Service.
Overview of the Entergy ICT Proposal

• Will establish an Independent Coordinator of Transmission (ICT)
• The ICT will:
  – Grant transmission service
  – Calculate Available Flowgate Capacity (AFC)
  – Administer Entergy’s OASIS
  – Perform an enhanced regional planning function
  – Provide oversight over the new Weekly Procurement Process
  – Administer the Entergy Transmission Expansion and Pricing Policy
The ICT Pricing Proposal is based on the Commission’s “Higher of” Pricing Policy

- Transmission expansion projects categorized as Base-funded or Supplemental Projects
- Base-funded projects are those projects in the ICT base plan that are required to honor long-term firm service commitments, to accommodate load growth from existing resources, and to maintain reliability
- Supplemental Projects include upgrades required for new PTP and NITS service, generator interconnection, and investments designed to reduce congestion and increase transfer capability
Cost recovery for PTP Service

• The costs of Supplemental Upgrades that are required to grant PTP service requests will be recoverable under the Commission’s “or” pricing policy.

• The requesting customer will be charged the higher of:
  – the applicable PTP rate recoverable from the customer over the requested term of service, factoring the cost of the upgrade into the rate; or
  – the incremental cost of the upgrade.
Network Service and Interconnection service do not create additional revenues

- Accordingly, the costs of Supplemental Upgrades required to accommodate generator interconnection service requests for Energy Resource Interconnection Service or Network Resource Interconnection Service will be recovered from the requesting interconnection customer.

- The costs of Supplemental Upgrades required to accommodate Network Customer service requests, including designation of new Long Term NITS resources, will be recoverable from the requesting Network Customer.
Transmission Rights

- The ICT proposal does not include an LMP/FTR market structure, thus offering financial transmission rights currently not an option.
- Customer’s funding Supplemental Upgrades will, however, receive:
  - The rights associated with the service request
  - Congestion protection
  - PTP allowance
  - Financial compensation for long-term service sold to others