Catherine Abbott and Jeffrey Skilling

Untitled Draft Presentation on Competitive Market Models
(Two Parts).

Enron Gas Services, 1993.
Introduction

- Professor Hogan has provided analysis from an economists standpoint of a model open access.
  - Seeks to solve congestion problem
  - Focuses on pricing locational values correctly

- My standpoint is different:
  - Commercial focus
  - Focus on what industry structure will foster innovation and find new ways of promoting economic efficiency in electricity market
  - Takes standpoint that operational constraints are real, but solutions can be found (Just as they were found in gas and telecommunications).
What is the Proper Focus of Harvard Project?

- Option 1: Focus on Next Steps
  - Identify and Build Consensus Around Critical Next Steps For Making Open Access Workable and For Improving Efficiency in Electric Markets.

- Option 2: Focus on End-Game
  - Resolve Now Whether Poolco or Bilateral Model is Optimal.
Option 1

Next Steps

Critical Next Steps (Regardless of “End Game”)


- Entry of "Non-Core" Customers into "Wholesale" Market.

- Bring Market Forces to Bear on as Many Aspects of Electric Market as Feasible.
  - Suggests that National Grid Regulation is Inferior to Lots of Competing Grids/Regulatory Bodies.
Next Steps (2)

Both Models (Bilateral and Poolco) in a Timely Fashion Require a Contract Market for Capacity:

- New Entrants and Existing Players Must be Able to Contract in a Timely Fashion For:
  - Transmission Capacity
  - At a Known Price
  - Under Known Terms and Conditions

- Difference Between the Models is Whether We Dispatch Based on These Contracts (Bilateral) or Whether We Separate Physical From Financial Flows (Poolco).

- Both Models Support the Need for a Secondary Market in Transmission Capacity.
Next Steps (3)

Under Both Models, Economic Efficiency Would Be Enhanced If States Expand Market Participation to “Non-Core” Customers:

- Creates Immediate Benefits to Industrial Competitiveness and Economic Growth Because Electric Suppliers Now Compete for that Market.

- Efficiency Gains Associated with Increased Competition for a Broader Array of Customers Generates a “Down Payment” on Price Tag of Stranded Investment (Gas Analogy).

- Allows Market to Gain Experience with Broader Array of Bilateral Trades: Brings “Fact Basis” of Operational Data to Resolve “End Game” Debate.
CONCENTRATION OF REVENUES – LONG DISTANCE
Percent

CUSTOMER SEGMENT
Monthly telecom expense

<table>
<thead>
<tr>
<th>Segment</th>
<th>Number of Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very small (under $150)</td>
<td>82</td>
</tr>
<tr>
<td>Small ($150-500)</td>
<td>8</td>
</tr>
<tr>
<td>Medium ($500-2,000)</td>
<td>5</td>
</tr>
<tr>
<td>Large ($2,000-10,000)</td>
<td>3</td>
</tr>
<tr>
<td>Very large (over $10,000)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

5% OF CUSTOMERS GENERATE 70% OF REVENUE
Option 2
Resolve “End Game”

Data is Not Available to Resolve “End Game” Debate.

- Poolco Model is Designed to Deal With Congestion as Central Operating/Commercial Problem to be Solved.

- Congestion Problem not Quantified.

- Western Systems Power Pool (WSPP) Operates on Bilateral Trades Today.
Option 2
Resolve “End Game”

Poolco Model is Structurally Inferior to Bilateral Model:

  - How Change: “But We’ve Never Done It That Way?”

- Regulated Poolco has No “Stake” In Efficient Operation of Spot Market.
  - Only Stake is in Reliability. Leads to Excessive Caution.

- Rethinking “What is Possible” is Key Benefit of Deregulation.
  - Market Participants have Incentive to Push the Envelope.
What Poolco Model Does Not Address

- Magnitude/Frequency of Congestion Problems

- Lack of Incentives for Poolco Operators to Structure an Efficient Spot Market in Bulk Power.
  - No “Stake” in Market Operations
  - Only Stake is Reliability
  - Hence Continue Current Incentive to Be Excessively Cautious
  - How Change “But We’ve Never Done It That Way?”

- Market Participants Have Financial Incentive to “Push the Envelope”.

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Focus of Harvard Project

- Build Consensus or Next Steps
- Need Not Resolve "Centralized Poolco" vs. "Bilateral Trades" End Game Issue Because Important First Steps are the Same.
Specific Regulatory Initiatives

○ FERC and the States Must Move to a “Level Playing Field” in Transmission Pricing, Terms and Conditions.

○ With Respect to Transmission Pricing, Enron Gas Services Supports:
  - Marginal Costs for Interruptible Service.
  - Negotiated Rates for Firm Service From Existing System.
    - Maximum of Averaged Embedded Costs
    - Minimum of Marginal Cost.
  - Long Run Incremental Cost When Firm Service Requires System Modifications.
Specific Regulatory Initiatives

- Explore Use of “Balancing Fees” to Address Inadvertent Flow Problem.

- With Respect to Who Bears the Cost of Stranded Investment...
  - Today All Customers Bear that Cost in their Rates.
  - Expansion of Open Access to Non-Core Customers adds Efficiency Engine to Wholesale Competition and Expands Efficiency Gains.
Summary

- A Bilateral Model Better Suits the Goals of Open Access Because the Market Participants, Rather than a Regulated Entity, Negotiate Commercial Terms of Trades (Not “Just” Price).

- However, We Need Not Resolve the “End Game” Debate Between the “Poolco” and Bilateral Model, Because Most of the Key Initial Steps Would Be the Same:
  - Workable Contract Market in Transmission.
  - “Non-Core” Open Access at State Level.
  - Competition Among Grids/State PUC’s For Different Models of Open Access.

- Additional Key Steps:
  - Level Playing Field
  - Get Pricing Right
  - Resolve Balancing/Inadvertent Flow Issues.