TRANSMISSION:
FUTURE DIRECTIONS AND OPPORTUNITIES

by

J. Stephen Henderson
Associate Director
Office of Economic Policy
Federal Energy Regulatory Commission

Presentation to
PURC Annual Conference
Gainesville, FL
April 29, 1994

The analyses and conclusions are those of the author and do not necessarily reflect the views of the Federal Energy Regulatory Commission, any individual Commissioner or any other staff member.

Overview of Transmission Access

Voluntary Access

• Market Based Pricing of Power Sales
• Mergers
• Comparable Service

Mandatory Access

• New 211 Authority as a Result of the Energy Policy Act
Voluntary Access:  
Market Based Pricing Standards for Power Sales

Seller Lacks Market Power

- A Utility Showing is Required

Generation Market Power

- Seller Does Not Dominate the Relevant Market

Transmission Market Power

- Seller Cannot Block Competitive Suppliers from the Buyer
- Blanket Authority—Open Access Tariff is Needed
- One-Time Transactions:
  - IPPs and Far-Away APPs Cannot Block Competitors
  - Nearby APPs—Service Not Required, But It Helps

Voluntary Access:  
Transmission Conditions in Mergers

Market Power Standards Similar to Those Used in MBP

- Market Concentration Evaluated

- Transmission Conditions in Mergers
  - Open Access Required in PacifiCorp
  - Open Access Offered and Modified in Northeast Utilities, Public Service Colorado, Entergy and CINergy
  - Open Access Not Required in Midwest Energy Merger (Iowa)
Voluntary Access: Comparable Service

Third-Party Service Should be Comparable to that Provided for the Transmission Owner’s Own Power Sales, Including:

- Commitment to Provide Firm and Nonfirm Service at a Cost-Based Price
- Expansion, Priority and Reselling

Possible Standards:

- Non-price Terms and Conditions Comparable to Those for Own-Utility Service
- Only Technical Restrictions On Service

Cases:

- NEPOOL Withdrawal of Access

Mandatory Access Under Section 211
As a Result of Energy Policy Act of 1992

Commission Can Order Transmission Service Upon Request if the Service:

- Is in the Public Interest
- Does not Unduly Degrade Reliability
- Does not Involve Retail Wheeling (State and Local Issue)

Who Can Request? Any Electric Utility, PMA or Independent Generator

Who Must Provide Service? Any Electric Utility, including Those in ERCOT, Muni’s, Coop’s and PMAs
Mandatory Access Under Section 211 (Cont.)

Experience: 8 Requests; 5 Proposed Orders; 1 Denied; 1 Pending; 1 Withdrawn

Issues:
- Public Interest—FP&L Case: Customer Fully and Fairly Compensates Utility
- Network Service—FP&L Case: Price, Not Service, is the Question
- Existing Transmission Agreements Not a Bar—FP&L Case
- Distribution or Generation Service Not a Bar—Tex-La Case

Streamlining 211 Requests
- Adapt 211 Procedures to Accommodate Transmission Service Needs
- Requests for Umbrella Service for Short-Term Trading
- Multiple Service Requests to Reduce Transactions Costs

Overview of Transmission Pricing

Traditional Pricing

Current Pricing Policy

Future Inquiry Into Possible Reform
Traditional Transmission Pricing

Rolled-In, Average Embedded Cost for Both Firm and Nonfirm Service

Postage Stamp Ratemaking

FERC Has Accepted the Industry's Contract Path Fiction

FERC Compares Non-Postage Stamp Proposals with Postage Stamp Revenues

Current Transmission Pricing Policy

Developed in the NU Merger and Penelec Wheeling Cases

Based on Three Goals for Firm Transmission Service, Consistent with Reliable Service:

- Hold Native Load Customers Harmless
- Provide Lowest Reasonable Cost-Based Third-Party Firm Transmission Rate
- Prevent Collection of Monopoly Rents by Transmission Owner and Promote Efficient Transmission Decisions

Commission Has Allowed:

- Incremental Cost Pricing when Expansion is Needed
- Opportunity Cost Pricing when there's a Bottleneck but Expansion is not Undertaken, Capped by Expansion Costs
- "Higher Of" Formula—The "Or" Pricing Model
Current Pricing Policy for Third-Party Firm Transmission

Cost of New Radial Facilities, Plus

A Grid Price Covering Cost of New Grid Facilities Not Needed "But for" the Third-Party Request

Grid Price = Capital Cost + Operating Cost

\[ \text{Greater of} \]

Embedded Cost or "Incremental" Cost

\[ \text{Lesser of} \]

Expansion Costs or Opportunity Costs

Transmission Pricing Reform Issues

Firm Transmission Service

- Parallel-Path Pricing
- Distance Sensitive Rates
- Contract Pricing

Non-Firm Transmission Service

- Non-Firm Demand Charges
- Spot Transmission Pricing
Major Pricing Themes

Incremental Pricing
- Customer-Specific Vintaged Responsibility for Grid Costs
- Group Average Incremental Cost of Grid

Loop Flow
- "Enhanced" Contract Path Pricing
- Flow Based Pricing, such as Megawatt Mile Method

Spot Transmission Pricing — Marginal Line Losses Plus Congestion Charge
- Spot Power Markets and Associated Trading Institutions Matter

Some Hypothetical Pricing Approaches

Capital Cost Recovery Concepts
- Customer-Specific, Location-Specific, Vintaged Pricing with Capacity Rights
- Group Average Incremental Cost, Flow-Based, Distance-Based Pricing with No Capacity Rights

Usage Pricing
- Nonfirm Rates with Full Capital Contribution and No Capacity Rights
- Spot Pricing with or without Capacity Rights

Interaction: Customer-Specific Approach Could Protect Existing Customers, But Involves Capacity Rights, Which Apparently Requires a Spot Pricing Concept and Reform of Short-Term Trading Institutions
Lessons From the Pricing Inquiry

There's No Consensus on "And/Or"

Commission's "Or" Policy Appears Incompatible With State Siting Benefit Requirements

There's No Consensus on Contract versus Parallel Path Pricing

Commission Sees Considerable Flexibility of Pricing Approaches Within the Context of Cost-Based Pricing

Regional Transmission Groups Could Be Instrumental in Formulating Any New Pricing Approach, But May Be Incapable of Addressing Pricing Without Commission Guidance

Concluding Questions

How Can Existing Customers Be Protected?

- Near Term: Would Pricing Zones Help?
- Longer Term: Would Capacity Rights Help?

How Can Capacity Rights Be Defined—Transfer Rights or Compensation?

Would Capacity Rights Help Improve Investment Efficiency?

- Is the Grid a Public Good Requiring Collective Decision Making Exclusively?
- Or Does the Grid Have Elements of a Private Good Allowing Customer-Driven Decision Making?
- The Issue is How Much Grid Capacity and Congestion Do We Want.

Would Spot Pricing and Spot Markets Help Improve Operational Efficiency? Must Trading Institutions Be Addressed Also?