

Principles of Interregional Transmission Expansion

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Preliminaries

- “I’m speaking on behalf of nobody I’ve ever met”
(Bill Hogan)
- FERC doesn’t actually let me work on this stuff, so I can’t be considered dangerous.
- Work motivated by the dearth of transmission siting, as well documented by Hirst and others.
- Policy problem: How can FERC use its authority under FPA section 219 to encourage interregional transmission projects?

Early FERC Transmission Policy

- Energy Policy Act of 1992.
 - Section 721 Open Access
 - Section 722 transmission rates and charges shall promote the economically efficient transmission and generation of electricity

Early Policy, cont.

- Transmission Pricing Policy Statement
 - Transmission pricing should foster efficient expansion of transmission capacity, efficient location of new generators and load, efficient use of existing transmission facilities, and efficient dispatch.
 - Transmission rates should reflect marginal costs.

Early Policy, cont.

- Order 888
 - An ISO's transmission pricing should promote efficient use of and investment in generation, transmission, and consumption of electricity.
 - Encouraged ISOs to coordinate transmission plans with other market participants and identify factors that could affect system operation and expansion.
- Order 2000
 - RTOs should implement a market approach with well-defined transmission rights and efficient price signals.
 - RTOs should be large (minimize seams problems).
- These orders fail to get transmission built.

Latter FERC Transmission Policy

- Proposed Pricing Policy for Efficient Operation and Expansion of Transmission Grid
 - FERC switched emphasis from encouraging merchant transmission to fostering transmission expansion by encouraging RTO participation and ITC development.
 - 50 basis point adder to ROE for transmission facilities whose operational control would be transferred to a FERC-approved RTO
 - 100 basis point adder for transmission facilities controlled by independent transmission companies.

Latter Policy, cont.

- EPAAct 2005

- Added Section 219 to the Federal Power Act.
- Section 219 requires FERC to establish incentive-based rate treatments for transmission.
- Section 219(a) states that transmission incentives should benefit consumers by ensuring reliability and reducing transmission congestion.

Latter Policy, cont.

- Order 679
- A public utility may request incentive-based rate treatment(s) in accordance with FPA section 205.
- The applicant must demonstrate that:
 1. Its facilities will ensure reliability or reduce transmission congestion.
 2. There is a nexus between the incentive and the investment.

Order 679, cont.

➤ Incentives

1. A ROE that encourages ITC (transco) formation.
2. Incentive-based rate treatment for public utilities that join RTOs.
3. 100 percent of prudently incurred CWIP in rate base.

➤ Other 679 elements

1. Single-Issue Ratemaking.
2. No cost-benefit analysis necessary.
3. Rebuttable presumption incentive-based rates for transmission corridor projects, regional planning projects.

Obstacles Facing Interregional Transmission

- Approval from multiple state agencies
- NIMBY
 - People don't welcome projects, especially if they perceive them to benefit solely people in other states.
- Cross-state externalities
 - Legitimate parochialism
- Interstate cost apportionment
 - Under current methodology, all of a project's cost is added onto a utility's revenue requirement.

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- Single-Issue Ratemaking
 - Allows an export line to be financed separately from a utility's revenue requirement. This opens up the possibility of cross-RTO transfer of import & export revenues (Regional Pricing Mechanism)
- Regional Pricing Mechanism

Principles, cont.

- Evaluate Additional Benefits Conferred by the Line
 - Reliability increases
 1. Interruptible service more valuable.
 2. Fewer blackouts means revenue should exceed revenue requirements (but see Kirschen & Strbac Electricity Journal, March 2004).
 - Redispatch cost savings – rebate some portion to the line builder.

Principles, cont.

- A Twist on FTRs

- Auction import/export fee revenue rights.
- Include a variable component for right to collection of revenues from redispatch cost savings.

- Ease the Regulatory Burden

- Shift evaluation process from FERC to RTOs, who possess superior information.
- "Nexus" - cost benefit analysis = speculation.

Principles, cont.

- Accommodate Increased Power Flow Inside RTO Boundaries
 - Increasing interregional flow can create congestion within RTOs, pre-empt existing flows. The RTO should identify links that need upgrading, accommodate increased flows (see Blumsack *et. al.* Carnegie Mellon Electricity Industry Working Paper CEIC-06-09).

Principles, cont.

- Work with States to Reduce Local Opposition to Lines
 - Does everybody have a price?
 - Does it cost less to compensate communities than to fight them in court?

Conclusion

- “Well...I see we have a long way to go”
(Chancellor Gokcon, Star Trek VI, The Undiscovered Country)
- “One of the advantages of being 1,000 light years from Federation Headquarters”
(Captain Kirk, Star Trek VI)