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

  - Section 721 Open Access
  - Section 722 transmission rates and charges shall promote the economically efficient transmission and generation of electricity
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.
EPAct 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
  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.
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)