Independent Transmission Companies: Business Models, Opportunities, and Challenges

Johannes Pfeifenberger

AAI's 13th Annual Energy Roundtable
Washington, DC

April 23, 2013
Contents

Background

Opportunities associated with independent transmission

Challenges for independent transmission

About The Brattle Group
Transmission is largely **infrastructure investments** based on **state or regional planning** with **cost recovery at regulated rates**

- Transmission is a public good:
  - Benefits broad in scope, wide-spread geographically, diverse in impacts on market participants, and occurring over many decades
  - Owners generally unable to capture sufficient portion of benefits
  - Will tend to lead to under-investment and over-use

- Some merchant transmission projects and competition for developing regulated transmission
  - Out-of-footprint investments by established transmission owners
  - Independent transmission developers
  - Elimination of “Right of First Refusal” (ROFR) of incumbent transmission owners for new builds approved in regional transmission plans
  - Merchant opportunities for HVDC lines in or between regions with sustained price differentials
### Emerging Non-Incumbent Business Models

While focusing primarily on regulated investments, non-incumbent transmission developers have become increasingly active. We identified 10 distinct business models:

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Transmission partnerships with incumbents</td>
<td>ITC and AEP JVs in SPP</td>
</tr>
<tr>
<td>2 Public-private partnerships</td>
<td>MATL, Transbay Cable, Path15</td>
</tr>
<tr>
<td>3 <strong>Independent transmission company (new build)</strong></td>
<td>Anbaric, TransElect, AWC</td>
</tr>
<tr>
<td>4 Merchant transmission</td>
<td>Zephyr, SunZia, Neptune</td>
</tr>
<tr>
<td>5 Transmission bundled with renewables</td>
<td>NextEra, RES Americas</td>
</tr>
<tr>
<td>6 Transmission subsidiaries</td>
<td>AEP</td>
</tr>
<tr>
<td>7 Spin-off of transmission into quasi-ITC</td>
<td>ATC</td>
</tr>
<tr>
<td>8 <strong>Independent transmission company (acquisitions)</strong></td>
<td>ITC</td>
</tr>
<tr>
<td>9 Passive investment</td>
<td>Private Equity</td>
</tr>
<tr>
<td>10 Buy/invest in developer</td>
<td>Cleanline, Path 15</td>
</tr>
</tbody>
</table>
What is an Independent Transmission Company?

Review of non-incumbent transmission business models revealed several flavors of “independent” transmission companies:

♦ Independent, project-focused transmission companies that focus on individual merchant or regulated transmission projects
  • TransElect (independent) — Path 15 (regulated)
  • Anbaric (independent) — Neptune, Grand Isle (merchant)
  • AWC (independent) — Atlantic Wind Connection (regulated?)

♦ Independent transmission companies that own and operate existing regulated transmission systems
  • International Transmission Company (ITC)

♦ Incumbent-affiliated companies, some looking beyond parent footprint
  • American Transmission Company (ATC)
  • AEP transmission affiliates (fully AEP-owned affiliates plus JVs with other utilities)
  • National Grid’s investment in Cleanline
  • Duke-American Transmission Company (DATC, a joint venture)
Opportunities for Independent Transmission

Independent transmission ownership can offer some opportunities for the marketplace:

♦ **Mitigation of vertical market power**
  • Independent transmission ownership avoids potential incentives of some vertically-integrated companies to use transmission operations and planning to discriminate against generation or retail competitors
  • FERC regulations and independent system operators (functional unbundling) appear effective in transmission operations, but success of functional unbundling is less clear in transmission planning

♦ **Mitigation of horizontal market power**
  • Reduces horizontal market power in wholesale generation; but less a concern in transmission given cost-of-service regulated nature of the grid
  • But some incumbents’ incentives to protect their service areas from entry by non-incumbents may reduce innovation and competition for regulated projects

♦ **Management focus / increased motivation and innovation**

♦ **Financing advantages** — no competing uses for scarce capital
A review of case studies of electric and gas industry restructuring internationally found potential advantages for markets with independent transmission businesses:

- “[E]vidence is compelling [that] ownership unbundling of transmission is a key part of energy market reform in the most successful … jurisdictions.”

- Ownership unbundling creates more “competitive wholesale and retail markets and effective regulation of monopoly networks” which likely is the “reason why it continues to be strongly resisted by the incumbent companies…”


DOJ’s 11/14/12 press release on Entergy investigation:

- “[C]ommitments to obtain membership in an RTO and divest its transmission system to a third party with the incentive to make efficient transmission investments are significant steps towards … increasing market transparency and oversight, and properly aligning incentives for the construction of transmission.”

- “Such measures will also directly benefit consumers, who will ultimately enjoy lower electricity prices and improved reliability as a result of RTO integration and the transmission system divestiture.”

The Brattle Group
In the U.S., independent transmission companies and ownership unbundling face significant challenges:

- Integrated companies’ disincentives to divest transmission and allow for entry by non-incumbents
- Opposition by state commissions and transmission customers
  - Fear of reduced state jurisdiction and loss of control
  - Opposition to higher FERC-allowed rates of return, investment incentives, and formula rates
- RTOs and market monitors often seen as achieving similar goals
- Under-appreciation of importance of long-term dynamic benefits from unbundled ownership’s impact on incentives, motivation, innovation, and increased wholesale market competition
- Difficulty of independent developers to capitalize on innovative project ideas in regional planning processes
  - Pre-emption by some incumbents through ROFR; although now partially addressed through Order 1000 requirements
  - RTOs’ competitive bidding of projects in attempt to address Order 1000 ROFR requirements may not reward innovative planning efforts
Additional Reading


Pfeifenberger, Hou, Transmission’s True Value: Adding up the Benefits of Infrastructure Investments, Public Utilities Fortnightly, February 2012.


“Comments of Peter Fox-Penner, Johannes Pfeifenberger, and Delphine Hou,” in response to FERC’s Notice of Request for Comments on Transmission Planning and Cost Allocation (Docket AD09-8).


Pfeifenberger, Testimony on behalf of Southern California Edison Company re: economic impacts of the proposed Devers-Palo Verde No. 2 transmission line, before the Arizona Power Plant and Transmission Line Siting Committee, Docket No. L-00000A-06-0295-00130, Case No. 130, September and October, 2006.

The Brattle Group
About The Brattle Group

www.brattle.com

North America

Cambridge, MA
+1.617.864.7900

Washington, DC
+1.202.955.5050

San Francisco, CA
+1.415.217.1000

Europe

London, England
+44.20.7406.7900

Madrid, Spain
+34.91.418.69.70

Rome, Italy
+39.06.48.888.10
About The Brattle Group

The Brattle Group provides consulting and expert testimony in economics, finance, and regulation to corporations, law firms, and governmental agencies around the world.

We combine in-depth industry experience, rigorous analyses, and principled techniques to help clients answer complex economic and financial questions in litigation and regulation, develop strategies for changing markets, and make critical business decisions.

Our services to the electric power industry include:

- Climate Change Policy and Planning
- Cost of Capital & Regulatory Finance
- Demand Forecasting & Weather Normalization
- Demand Response & Energy Efficiency
- Electricity Market Modeling
- Energy Asset Valuation & Risk Management
- Energy Contract Litigation
- Environmental Compliance
- Fuel & Power Procurement
- Incentive Regulation
- Market Design & Competitive Analysis
- Mergers & Acquisitions
- Rate Design, Cost Allocation, & Rate Structure
- Regulatory Compliance & Enforcement
- Regulatory Strategy & Litigation Support
- Renewables
- Resource Planning
- Retail Access & Restructuring
- Strategic Planning
- Transmission
Johannes P. Pfeifenberger
Principal
Cambridge, MA
Hannes.Pfeifenberger@brattle.com
617.864.7900 office
617.234.5624 direct

Johannes (Hannes) Pfeifenberger is an economist with a background in power engineering and over 20 years of experience in the areas of public utility economics and finance. He has published widely, assisted clients and stakeholder groups in the formulation of business and regulatory strategy, and submitted expert testimony to the U.S. Congress, courts, state and federal regulatory agencies, and in arbitration proceedings.

Hannes has extensive experience in the economic analyses of electricity wholesale markets and transmission systems. His recent experience includes reviews of RTO capacity market and resource adequacy designs, testimony in contract disputes, and the analysis of transmission benefits, cost allocation, and rate design. He has performed market assessments, market design reviews, asset valuations, and cost-benefit studies for investor-owned utilities, independent system operators, transmission companies, regulatory agencies, public power companies, and generators across North America.

Hannes received an M.A. in Economics and Finance from Brandeis University and an M.S. in Power Engineering and Energy Economics from the University of Technology in Vienna, Austria.

Note:
The views expressed in this presentation are strictly those of the presenters and do not necessarily state or reflect the views of The Brattle Group, Inc.