Planning in a competitive market environment
The New York Story

Rana Mukerji
Senior Vice President - Market Structures
New York Independent System Operator

Harvard Electricity Policy Group 74th Plenary Session
“Transmission Planning: The Challenges Ahead” Panel
Santa Monica, CA
February 27-28, 2014
Transmission Investment & Markets
The Road To FERC Order 1000

- **FERC Order 888** - 1996
  - *Open Access*
- **FERC Order 2000** - 2000
  - *Formation of RTOs*
  - *FERC Backstop Transmission Siting Authority*
  - *FERC Incentive Rates for Transmission*
- **FERC Order 890** - 2007
  - *Regional Planning*
  - *Economic Planning*
- **FERC Order 1000** - 2011
  - *Inter-regional planning & cost allocation*
  - *Transmission to achieve public policy goals*
  - *Elimination of right-of-first-refusal (ROFR) for incumbent TOs*
Transmission Investments & Markets

- Characteristics of Transmission Investments
  - Generally “Lumpy”
  - Transmission Planning based on a “Horizon Year” – typically 10 to 25 years out in the future
  - Financial instruments (FTRs, TCCs) provided for transmission expansion
  - More complicated today, under restructuring, as generation and transmission plans are not integrated
  - Beneficiaries identified from a reasonable expectation of future system state

- Effect of “Lumpy” Transmission Investments on Markets
  - Elimination of congestion leads to transmission rights (FTRs or TCCs) becoming worthless
  - Has been characterized as “market failure”
Hogan’s Argentine Model
A framework to incorporate “lumpy” transmission investments into electricity markets*

- **Major Expansion of Transmission by “Public Contest” Method**
  Overcoming market failure without overturning markets
  - Regulator applies the “Golden Rule” (Cost Benefit Test). Use the same economic cost benefit analysis to identify expected beneficiaries
  - 30%-30% Rule. At least 30% of beneficiaries must be proponents. No more than 30% of beneficiaries can be opponents.
  - Assign costs to beneficiaries with mandatory participant funding
  - Award either Auction Revenue Rights or Long Term FTRs to beneficiaries with costs

Reliability Needs

- NYISO proposed a **Comprehensive Reliability Planning Process (CRPP)** for the identification and resolution of reliability needs that was approved by FERC on December 28, 2004
  - *This was a voluntary filing—not under a FERC directive*
- FERC found the NYISO CRPP:
  - to “…properly balance…” consideration of market-based and regulated solutions; and that
  - “It is certainly a substantial improvement over planning processes that have traditionally depended upon TO-developed regulated solutions.”
Regulated Backstop Solution Implementation

- If market-based solutions are insufficient to meet Reliability Needs by need date, then:
  - NYISO can “trigger” a regulated backstop solution
  - NYISO requests Responsible TO(s) to seek NYS PSC approval of backstop solution
  - NYS PSC and other regulatory agencies proceed with their review & approval
Economic (CARIS) Objectives

- Identify congestion on the New York State bulk power transmission system – in response to Order 890

- Phase 1: Select the three CARIS studies
  - Develop three generic solutions (transmission, generation, demand response) for each of the three studies to mitigate identified congestion
    - Provide costs and benefits analysis
    - Provide scenario analysis to determine the impact of uncertainties
  - Provide the information to interested parties to develop transmission, generation or demand response projects to relieve congestion

- Phase 2: Perform Benefit/Cost analysis of proposed economic transmission project to determine eligibility for cost recovery under NYISO tariff
  - For proposed transmission projects, the identified beneficiaries vote to approve cost recovery through the NYISO’s Tariff (Only ISO/RTO to adopt elements of Hogan’s Argentine Model)
NYISO Compliance with FERC Order 1000
Regional Planning

Order 1000 Requirements:

• All transmission providers must have a regional transmission planning process in place that meets Order 890’s nine Planning Principles and includes development of a comprehensive system plan
• Cost allocation must comply w/Order 1000’s Six Principles

Joint Compliance Filing:

• NYISO has already been found compliant with Order 890’s Planning Principles by the Commission for its reliability and economic planning processes
• Compliance demonstrated in October 2012 compliance filing, including references to FERC’s Order 890 Compliance Orders
• Order 1000 Cost Allocation principles added to tariff
Non-Incumbent Transmission Providers

Order 1000 Requirements:

• Final Rule eliminates the right-of-first refusal ("ROFR") tariff provisions for incumbent transmission providers with respect to building proposed facilities that are included in a regional transmission plan
  ▪ Several exceptions are granted for local facilities/upgrades /use of existing ROWs

Joint Compliance Filing with New York TOs:

• NYISO tariff does not have any ROFR provisions
• NYISO planning process contains provisions for non-incumbents to participate on an comparable basis
• Tariff revisions were made to incorporate:
  ▪ Non-discriminatory qualification criteria
  ▪ Detailed information requirements for proposed transmission projects
  ▪ Other specific requirements of Order 1000
Public Policy Requirements

Order 1000 Requirements:
• Local & regional planning processes must consider transmission needs driven by public policy requirements established by state or federal laws or regulations
• No requirement to go beyond existing laws or regulations—but permitted on a voluntary basis
• Allows for regional flexibility in meeting this requirement
• Not intended to infringe on state authority

Joint Compliance Filing:
• Proposed PPR process includes:
  ▪ Identification of transmission needs driven by public policy requirements
  ▪ Opportunity for stakeholders to propose solutions
  ▪ Process for evaluation of proposed solutions
  ▪ Identification of potential impact on competitive markets
  ▪ Consideration of non-transmission solutions—as appropriate
  ▪ Cost allocation methodology utilizing default based on load ratio share
  ▪ Specification of appropriate roles for NYPSC/NYDPS & NYISO
Interregional Planning Compliance Framework

- The Northeast ISO/RTO Planning Coordination Protocol (the “Protocol”- among ISO-NE, NYISO & PJM) already meets many of the Inter-regional Planning requirements of the Final Rule
- Some modifications/clarifications were needed
- Revisions to individual tariffs also needed
- Continues an active stakeholder process established under the Protocol (IPSAC)
- ISO-NE, NYISO & PJM held numerous meetings with their stakeholders on these issues since Spring 2012
- Canadian neighbors are already participants in inter-regional planning activities in the Northeast
- DOE-ARRA funded interconnection-wide planning efforts are encouraged by FERC (ISO-NE, NYISO and PJM are sponsors and active participants in EIPC)
- Compliance filing on 7/10/13 – awaiting FERC Order
Transmission Project Proposals in New York
Overview of New York’s Aging Electric Infrastructure*

- 11,600 miles of high voltage transmission statewide
- Last major cross-state transmission project built in 1980s
- 40% (4,700 miles) of the existing transmission system will likely need to be replaced over the next 30 years

Current Transmission Proposals in New York

• Governor’s Energy Highway Request for Proposals – Solicitation for Public/Private Investments:
  - http://www.dps.ny.gov/ACTransmission/

• New York Transmission Owners – Transco Projects:

• Champlain Hudson Power Express
  - 500 kV Underwater/underground HVDC Transmission Line from Quebec to NYC
  - http://www.chpexpress.com/about.php

• NextEra – Transmission Projects:
  - 148 mile 345 kv Marcy to Pleasant Valley Project
  - 57 mile 345 kv Oakdale to Fraser Project

• North America Transmission Projects:
  - 80 mile 345 kv Edic to Fraser Project
  - 65 mile 345 kv New Scotland-Leeds-Pleasant Valley Project
  - http://www.nat-ny.com/

• Boundless Energy Projects:
  - Leeds Path West Projects (Overhead/underground 345 projects from Leeds to Hurley to Roseton to East Fishkill)
  - http://www.leedspathwest.com/home
New York Transco Projects*

  Public Forum, January 29, 2013

- **Proposed in current PSC process for transmission congestion relief**
- **Approved by PSC for**
  Proposed in Indian Point Contingency Plan
- **Proposed in current process and approved by PSC for**
  Proposed in Indian Point Contingency Plan

- **Ramapo - Rock Tavern**
- **Staten Island un-bottling**
- **Oakdale - Fraser**
- **Marcy Series Compensation**
- **Edic- Pleasant Valley**
APPENDIX
FERC Order No. 890 expanded the NYISO planning process to include LTPP and economic planning process called CARIS, that together with the reliability planning process (CRPP) comprise a new 2-year planning process known as CSPP.
Role of NYS PSC* in the NYISO CRPP

- New York State Public Service Commission (NYS PSC) reviews “regulated alternatives” proposed by IOUs or Other Developers upon request
- Reviews and screens “gap” solutions
- Reviews TOs’ backstop solution and alternative regulated solutions when NYISO determines action is necessary to ensure reliability
  - PSC selects the preferred regulated solution
- PSC generally has final siting & certification authority with respect to backstop solution ultimately selected
- PSC Staff participation in the NYISO process facilitates necessary approvals to ensure reliability

Order 1000: Background

°FERC Order 1000: Final Rule on Transmission Planning & Cost Allocation
- Issued on 7/21/11 (Docket RM10-23-000)
- Builds on the requirements of Order 2000 and Order 890

-Key Provisions
- Establishes a Regional Planning requirement for all FERC jurisdictional Transmission Providers
- Requires a public policy transmission planning process
- Requires comparable treatment for incumbents & non-incumbents
- Requires an expanded inter-regional planning process
- Establishes six principles for regional and inter-regional cost allocation

This presentation provides a status update on NYISO compliance
April 18, 2013 Order: Regional Compliance

- Required significant changes to the existing reliability planning & proposed public policy planning processes
  - *NYISO—not the NYPSC—must select the more efficient or cost effective transmission project*
  - Required comparable evaluation of “all resources” –not just transmission—in the proposed public policy planning process
  - Required additional support for the proposed load ratio share default cost allocation for public policy transmission projects
  - Required changes and clarifications to the proposed entity qualification and project information requirements

- Required NYISO to advance the proposed effective date to January 2014 -- regardless of whether FERC has issued a final order by that time
Second Regional Planning Filing

- NYISO and NYTOs made a joint further compliance filing on October 15, 2013
  - NYISO selects “more efficient or cost effective” transmission projects for cost allocation
    - For reliability and public policy transmission projects
    - Cost, operability, expandability, and other criteria provided
  - Developers and TOs can propose cost allocation methodology with default “load ratio share” allocation
  - TOs consider public policy in local planning
  - Developer and project qualifications specified

- FERC approval pending
  - Not waiting for FERC Order; new reliability planning process started January 1, 2014; public policy planning kicks off in Q4
The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state’s bulk electricity grid, administering New York’s competitive wholesale electricity markets, conducting comprehensive long-term planning for the state’s electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.

www.nyiso.com