

REGIONAL TRANSMISSION ORGANIZATIONS: DON'T SETTLE FOR Nth Best ($N \gg 1$)

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PROBLEMS RTO INITIATIVE SEEKS TO FIX

- Discriminatory access to transmission services through operating, interconnection and investment decisions by transmission owners who are *also* market participants (generators, marketers, etc.)
- Balkanized ownership and operation of transmission facilities complicates efficient scheduling transactions and managing network constraints, increases transmission costs, and reduces competition
- Balkanized ownership and operation of transmission has led to balkanized pattern of wholesale (and retail) market designs and operating practices, reducing competition, increasing costs
- Inadequate transmission investment in a decentralized system is a stubborn problem that undermines wholesale market performance

WHY DO WE HAVE THESE PROBLEMS IN THE U.S.?

- Wholesale and retail competition initiatives have proceeded without a clear and coherent national model for reform
- EPact92 and Order 888 envisioned limited changes in industry structure (vertical integration), mandated no structural reforms and focused on behavioral rules that were incompatible with financial interests of transmission owners that are also in generation, marketing and retailing
- The U.S. failed to adopt standard textbook reform framework up front on a national basis and has encouraged a “let a thousand flowers bloom” approach
- Traditional U.S. industry structure is not well-adapted to successful wholesale and retail competition initiatives



INDEPENDENT REGIONAL TRANSMISSION ORGANIZATIONS ARE ESSENTIAL

- The problems are real and the goal of creating regional transmission organizations is sound
- There are important questions about the best organizational form for RTOs
 - For-profit or not-for-profit ?
 - Transmission asset ownership or merely operating assets owned by others ?
 - Extent of vertical integration between transmission asset ownership and system operations ?
- There are important questions about the details of wholesale market design and optimal geographic scope of RTO

THE TEXTBOOK MODEL

- Separate regulated monopoly segments (T, D, SO) from competitive segments (generation, wholesale and retail marketing) [Solve independence problems structurally]
- Create Transco/SO or Transco + SO that spans region large enough to internalize significant network externalities and deals with “seams” issues [Solve network balkanization]
- Create transmission access, wholesale market, and congestion management institutions that facilitate wholesale and retail competition and mitigate market power [Create uniform basic wholesale market platform and mitigate market power]
- Introduce incentive regulation for T,D, SO to promote efficient operations, investment, cooperation with third party T initiatives [Promote operating and investment efficiencies]

EMERGING U.S. ISO/RTO OWNERSHIP AND GOVERNANCE MODEL

- Not-for-profit SO entity that manages operation of transmission facilities owned by others: scheduling, congestion management AS, interconnection rules, market monitoring, public markets, for balancing, AS, congestion management, etc.; administers transmission tariff, OASIS, etc.; large regional scope
- Does not own transmission assets, effectively rides on top of the balance sheets of transmission owners and market participants, and has no financial responsibility for its actions
- Facilitates transmission planning and investment from incumbent transmission owners and third-parties within a region and interconnections with proximate regions
- Responsible to independent Board and FERC

THE NOT-FOR-PROFIT NO-ASSET ISO/RTO MODEL IS AN “Nth Best” SOLUTION ($N \gg 1$)

- We have grasped at this ownership/governance structure as an alternative to *real* structural reforms that could solve the problems more effectively. We do not manage pipelines, telephone networks or railroads this way.
- Not for profit entities operating assets owned by others with none of their own capital at risk have a long record of failure
 - soft budget constraints
 - lack of financial responsibility and market “takeover” discipline
 - separation of ownership from control of assets increases transaction and coordination costs
 - where has an organization with this ownership, governance and incentive structure worked well in the long run? Nowhere!

THE NOT-FOR-PROFIT NO-ASSET ISO/RTO MODEL IS AN “Nth Best” SOLUTION ($N \gg 1$)

- Organizations with these ownership/governance attributes reduce the value of existing assets, discourage investment, are slow to adopt innovations, become highly politicized, and have inter-generational human capital problems
- The not-for-profit + no asset RTO is a large regional *monopoly* with no financial incentives or takeover constraints to discipline poor performance. The worst kind of monopoly is one that cannot be held financially responsible for its actions
- This structure places an unrealistic burden on the Board and will prove very difficult to regulate in the long run

OWNERSHIP FORM AND INCENTIVES ARE IMPORTANT

- It is not feasible or economical to decentralize *all* network operating and investment decisions to market mechanisms
- Active management of network can improve market performance and reduce costs
- Congestion costs and AS requirements are not exogenous and can be affected by the actions of TO and SO
- TO and SO should have incentives to minimize costs of congestion, including supporting third-party initiatives
- Financial responsibility is necessary for providing good incentives for active management.

DON'T GIVE UP ON ITC MODEL FOR RTOs BASED ON REAL STRUCTURAL REFORM

- Divestiture of transmission from generation, marketing and related activities solves independence problems
- Horizontal integration of transmission assets to create regional independent transmission companies with major SO functions solves balkanization problems
- Introducing performance-based regulation to match ITC operating, planning and investment responsibilities and active management reduces costs and improves market performance
- The ITC model will work well if the will to proceed with structural reform is there



THE ITC MODEL IS THE NORM IN MOST COUNTRIES

- We have international experience to draw on to fine-tune ITC structure, regulation, market designs, and third-party initiatives
 - England and Wales
 - Argentina
 - Australia
 - Norway
- ITC structure works well and generally has a much longer record of experience than any U.S. ISO
- Reliance on not-for-profit No-asset SO without structural reform (T separation and horizontal integration) is an unusual approach for which international experience is poor (e.g. Chile)



ITC MODEL IS COMPATIBLE WITH ANY WHOLESALE MARKET DESIGN

- Best features of PJM market design can be implemented with a for-profit ITC model and integrated into an incentive regulation mechanism
- ITC does not require a “black box” congestion management system and is compatible with both physical and financial rights systems
- Active ITC management can mitigate imperfections with transmission rights systems and improve their performance
- ITC structure can accommodate third-party initiatives

DON'T GIVE UP ON STRUCTURAL REFORM

- Vertical integration between TO/SO and power suppliers and marketers will be a continuing problem requiring difficult regulatory interventions. Get independence through structural reform not regulation.
- If we don't have the will to require structural reform let's at least encourage it.
- Let's at least not make decisions that discourage or preclude sensible structural reform leading to the creation of regional ITCs