



# Drawing the Line for Transmission Investment

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Roy J. Shanker Ph.D.

HEPG

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## THE OBJECTIVE

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- We would like to see a world where competitive markets establish new transmission resources at parity with generation and load management



## THE COMPLICATION

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- We know that certain limitations will prevent a purely market solution for new transmission investment, possibly requiring central plans.
- Though often exaggerated we need to deal with issues such as:
  - Integration with the existing grid
  - Scale economies
  - Free Riders
  - Estimation of incremental rights
- However, “unbridled” central planning “kills” economic investment



## THE PROBELM

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- How do we integrate the market based objective while addressing the limitations that may require some elements of central planning?
- ***E.G. DRAWING THE LINE***



## DISCUSSION

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- Want to confirm basic notion that ***unfettered*** central planning of transmission (“reliability and economics”) will not only destroy merchant transmission but also likely will undo most of the basic market elements of FERC SMD—e.g. lead to a return to overall central planning
- Want to propose a potential partial resolution where some planning and a merchant transmission alternative can coexist



## SLIPPERY SLOPE

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- Central transmission planning is fundamentally at odds with a market based system
  - It devalues any property rights a merchant builder may receive
  - It removes a major incentive for load to hedge via transmission expansion and rights
  - It penalizes or double charges load that has historically acted responsibly and hedged
  - It requires the ISO/RTO to effectively take a forward market position
  - **Ultimately leads to IRP/Central Plan**



## ULTIMATELY—IRP

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- If you take a “position” on transmission, how justify not evaluating this against generation and/or load management?
- If a generator sees the potential for the value of a “good” location to be taken away by rolled in investments in transmission why would they take the investment risk, or rather who would loan them the money?
- The ultimate answer to both is a total central plan-NOT WHERE WE THOUGHT WE WERE GOING



## THE REAL QUESTION—WHO PAYS?

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- The reality of the fight is the “usual”: a quest to try and get the other guy to pay
- Inevitably advocates of centrally planned, rolled in, transmission for economics also argue about generic and fuzzy system benefits, and SPREADING THE COSTS BROADLY



## THE REAL QUESTION—WHO PAYS?

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- Everyone agrees that the “beneficiary pays” is a good approach
- The reality is that true precision in identifying beneficiaries is roughly the equivalent of a merchant system
- Getting a good measure of who the beneficiaries are to allow equitable cost allocation is very difficult



## THE REAL QUESTION—WHO PAYS?

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- Consider an example of parties in a “congested area” that already have in place hedges, not through CRRs but with local generation or third party marketers
- Economic transmission enhancements are just windfalls to the generators and marketers who sold the hedges, as their load still pays for the hedge, but congestion faced by the party who sold the hedge declines



## THE REAL QUESTION—WHO PAYS?

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- How do we prevent this type of windfall or double charges to the party that bought the hedge?
  - Possible, but very invasive
  - For example
    - Allocate cost to the “zone” which benefits
    - Allow everyone who can PROVE they are hedged to opt out of payments for the transmission upgrade



## THE REAL QUESTION—WHO PAYS?

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- However, once we get this precision in “who pays” **what is the need for a central plan in the first place?** The costs now replicate a private transaction.
  - Maybe just to provide data
  - Planning assistance
  - Coordinate alternatives
  - **SHOULD NOT BE TO DIRECT NEW PROJECTS TO BE BUILT ABSENT MARKET FAILURE**



## IS THERE AN ALTERNATIVE?

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- Can we draw the line to keep from going down the unfettered economic expansion path?
- Assuming not undercut by FERC direction the answer would appear to be yes.



## IS THERE AN ALTERNATIVE?

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- Necessary elements:
  - A “preserve” for merchant projects **where risks and benefits are known and knowable**
  - A directed but limited system for assuring transmission upgrades **to resolve market failures and protect system reliability**
  - A **competitive process that opens “directed” opportunities** to others, e.g. where there is a reliability or market failure project



## IS THERE AN ALTERNATIVE?

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- For the most part, this is the infamous notion of separating reliability and economic upgrades
- The common retort is that this isn't possible:
  - There is no clean line between reliability and economics
  - We can't measure rights etc.



## IS THERE AN ALTERNATIVE?

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- These criticisms are simply wrong.
  - **We can distinguish reliability from economic needs**
- We have engaged in transmission planning for years that distinguished reliability upgrades from economics
- E.g. in satisfying NERC standards one NEVER HAS TO KNOW ANYTHING ABOUT THE COST OF CONGESTION-we do this every day
- True, reliability upgrades result in economic impacts, but this represents a known and knowable risk based on explicit planning standards. Appears acceptable to markets.



## IS THERE AN ALTERNATIVE?

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- These criticisms are wrong:
  - **We have reasonably well developed tools for measuring incremental rights**
- NYISO put out RFP based on stakeholder straw proposal 3 years ago to implement measurement of incremental rights-proposed process done
- PJM is awarding incremental rights to expanders today based on ISO estimates.



## STRAW PROPOSAL

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- Establish a baseline transmission expansion plan reflecting:
  - Reliability upgrades
  - Identified market failures (e.g. scale or unique resources)
- Post the plan with reasonable notice, e.g. 5 year lead time
- Allow merchant T,G, and LM to proceed until the last feasible time to start baseline projects
- Bid out remaining baseline projects among T,G, and LM
- **ALL ELSE IS MARKET BASED**



## STRAW PROPOSAL

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- This was basically the PJM proposal at the working group level prior to the direction of FERC to include economic proposals in the baseline expansion plan



## FERC SCHIZOPHRENIC?

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- This isn't an intellectual problem
- People are "fighting in the trenches" to preserve a rational market design where market driven transmission has a long term feasible role
- FERC is complicating the field with inconsistent seemingly and contradictory orders
- **The current default appears to be the END of a true merchant alternative by mandating economic expansions in the baseline and ultimately IRP**



## FERC SCHIZOPHRENIC?

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- On one hand FERC has stated that it wishes to encourage the development of merchant transmission within the context of new or existing ISO's (see PJM excerpts)
- On the other, FERC has mandated that ISO's consider, incorporate and direct "expansion for economics" into their planning process
- **FERC HAS FAILED TO "DRAW THE LINE"** leaving a result where the mandate for directing economic projects can/will destroy merchant opportunities



## FERC SCHIZOPHRENIC?

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- FERC seems to have "fallen" for the various arguments that SMD/LMP has failed to resolve problems with "inadequate" transmission and congestion
- Reality: the current infrastructure, even if deemed inadequate was not built on the SMD "watch"



## FERC SCHIZOPHRENIC?

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- The status quo in most instances is satisfactory and reliable
- What LMP and SMD is displaying are long standing historic subsidies
- Those being subsidized have a choice of screaming "I want my subsidy to continue" or "There is insufficient transmission"-
- Politically the choice is obvious



## FERC SCHIZOPHRENIC?

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- Indeed what limited empirical evidence exists suggests that where clear property rights exist there is a supply of new merchant transmission projects being proposed where rights are clear:
  - PJM UPGRADES FOR GENERATION
  - PJM MERCHANT QUEUE
  - NY MERCHANT PROJECTS