

Grid Expansion: Who Should? Just Do It!

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Transmission: An Aging, Underinvested Asset

- \$64B – Original cost of FERC jurisdictional transmission.
- \$~2B – Annual CapEx.
- \$~1B – Annual replacement CapEx.
- \$~2.5B – Annual estimate of replacement CapEx to maintain integrity.
- \$~2.5B – Annual estimate of CapEx for expansion to maintain NERC standards.
- \$??B – Expansion for “market” reasons.



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Is Transmission a Contestable Market?

- Yes and no...
- However – transmission is a network that operates as an integrated whole with inherent externalities.



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The Integrated Nature of the Grid

- The Control Area.
- The SCADA Center (System Operation Center).
- The Substation environment.
- Integrated active system devices.
- Only one entity can do each of these functions at any time. Traditionally it has been the same entity. But they do not all have to be done by the same entity or by the transmission asset owner.



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Who Should Replace/Maintain Existing Transmission Infrastructure?

- The asset owner.
- Or – someone under contract to the asset owner.
- This is a necessary obligation of a regulated utility.



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Who Should Build/Add?

- Existing regulated asset owners.
 - For integrated additions.
 - For “footprint” facilities.
 - Costs allocated to one transmission owner’s zone.
- Qualified builder/owners.
 - For “regional” facilities.



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What About Regional Facilities?

- Regional Facilities are those so declared by the RTO.
 - Costs should be paid for by customers in more than one transmission owner's zone.
- Projects would generally be large.
- These include major new lines.
 - Some 230 and 345kV.
 - Perhaps all 500 and 765kV.



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What About The “Good Ideas”?

- “Who builds” is decided easily.
 - Use the prior template.
- Who gets the FTRs/TCCs from the new capacity is harder.
 - Free rider problems.
 - RTO needs to develop a solution.



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In Closing...

- New Transmission needs to be built in order to maintain integrity and facilitate markets.
- New mechanisms and entities for building this transmission should be used in certain circumstances.
- To maximize efficiency and investment attractiveness, there needs to be a clear delineation on who can build what.
- The tricky issue of rights allocation, which is separate from who builds, needs to be handled by the RTO.



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