

Sustainable FERC Project: Southeastern Regional Transmission Planning Update

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Chattanooga, TN



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Agenda Items

- I. Introduction: Sustainable FERC Project
- II. Non-Transmission Alternatives (NTAs)
- III. SERTP NTA Process and Technical Team Involvement

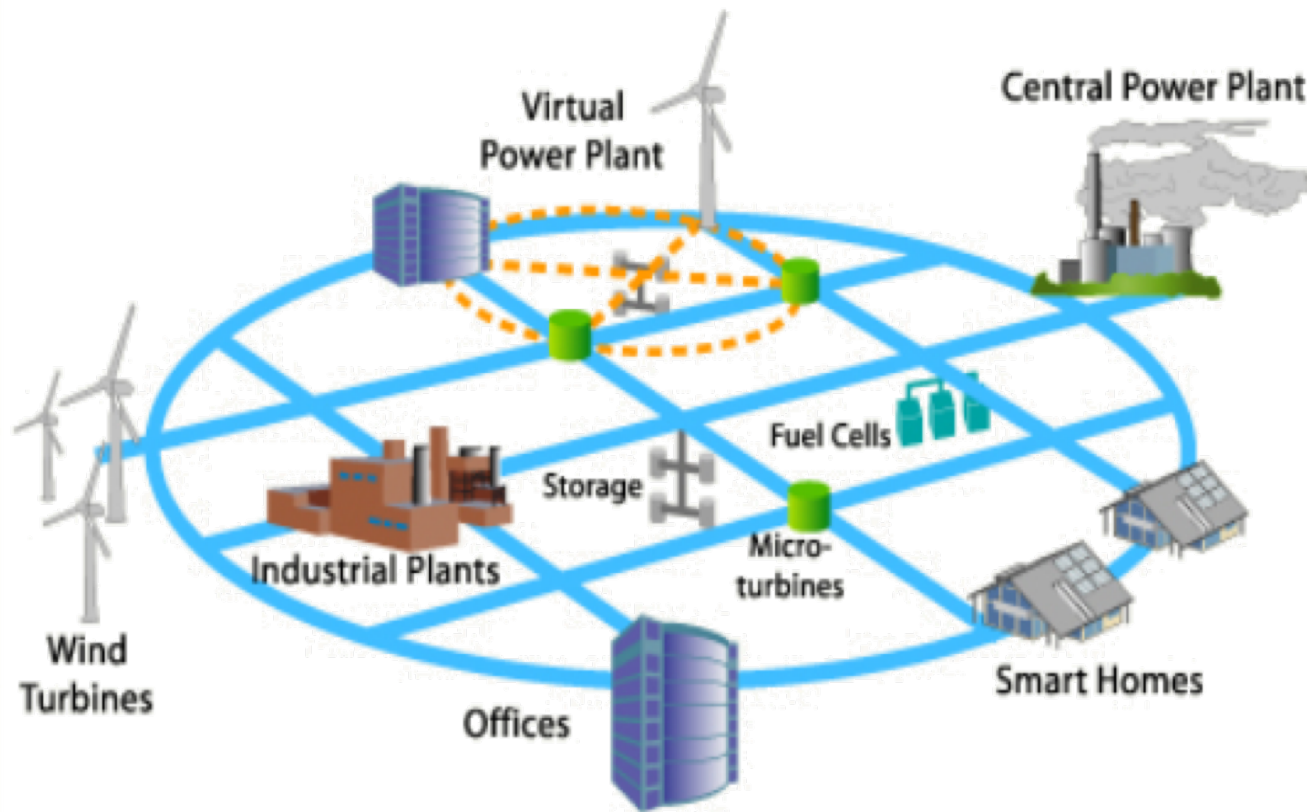
Sustainable FERC Coalition Partners



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What are non-transmission alternatives?



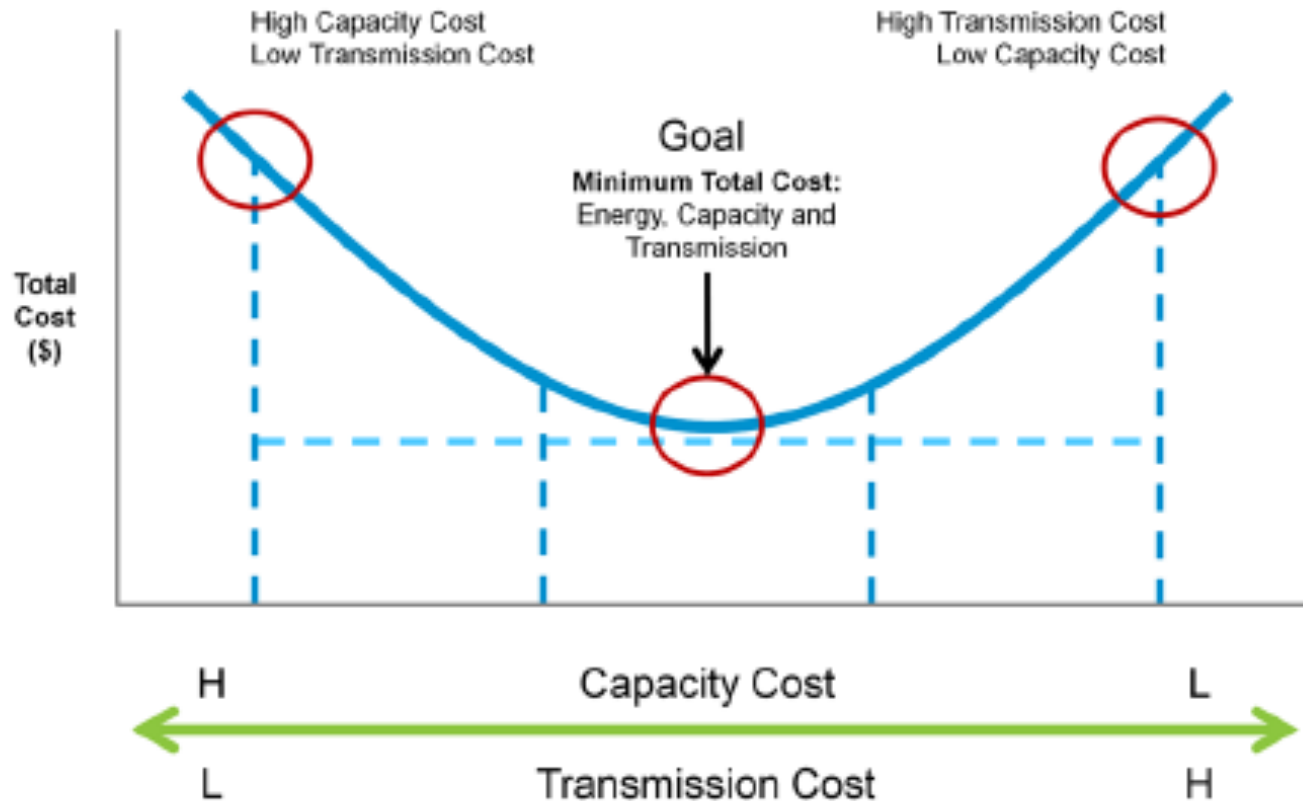
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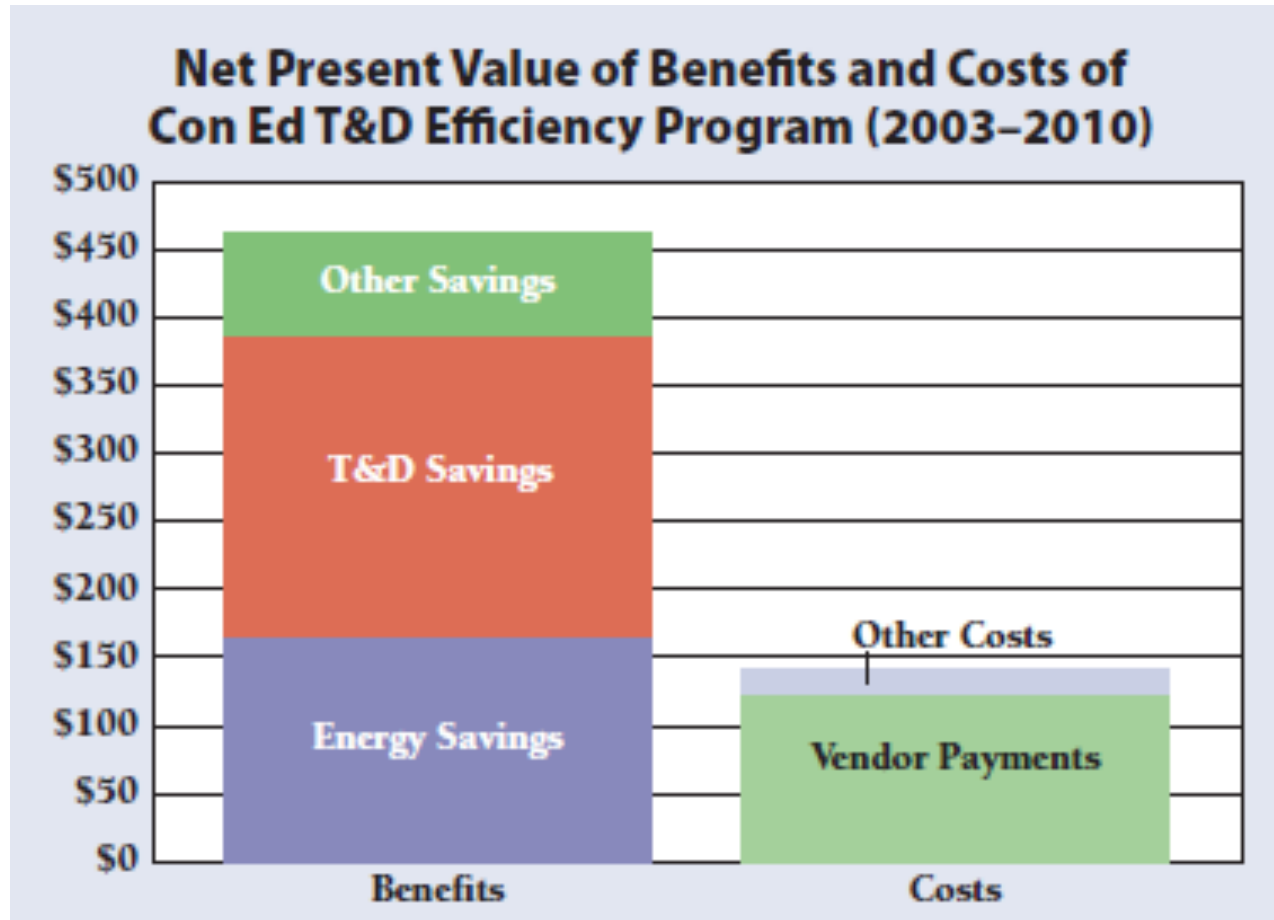
What are non-transmission alternatives?

- SERTP Sponsor Tariffs do not currently define NTAs. It would be helpful to have the definition more clear for participants.
 - Should include all types of non-wires technologies (including storage, generation DR, and EE), and any combination of those resources
 - Should include solutions that reduce or defer Tx needs in addition to solutions that eliminate needs
- Tx projects face well-documented challenges:
 - Siting battles, allocation of costs, environmental impacts, litigation

Use of NTAs can minimize costs and environmental impacts



Projects demonstrate cost-effectiveness of NTAs



\$300 million in net benefits



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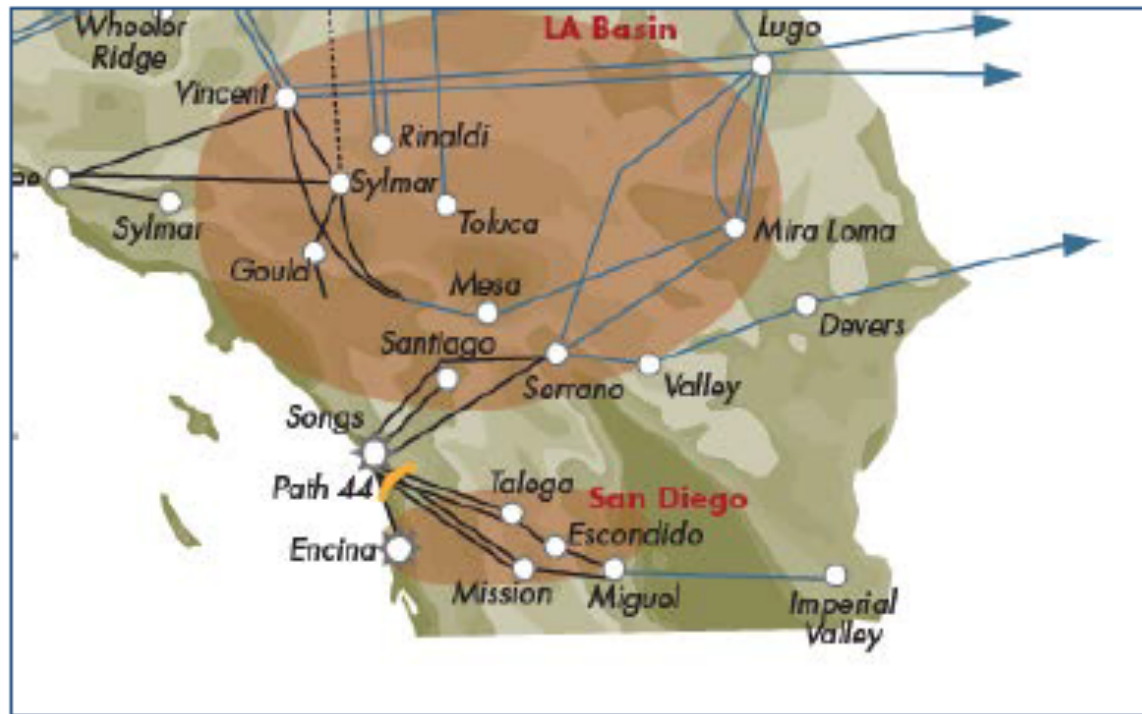
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CAISO is incorporating cost-effective NTAs into its transmission plans



California ISO

Shaping a Renewed Future



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Projects demonstrate cost-effectiveness of NTAs

Boothbay Maine Pilot – NTAs serve same need at less than 1/3 cost of Tx infrastructure



Some “non-wires solutions” ARE Tx resources

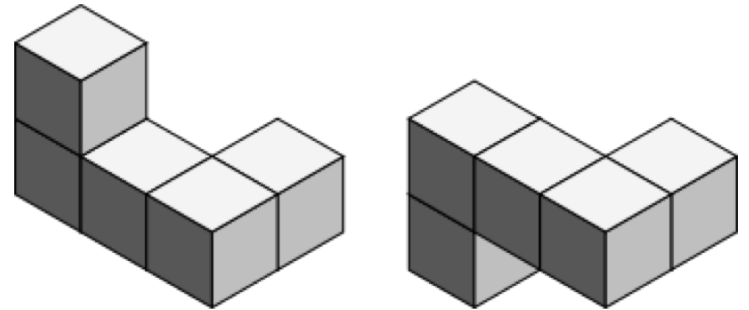
- In Order No. 1000, FERC recognized that “in appropriate circumstances, alternative technologies may be eligible for treatment as transmission for ratemaking purposes.”
- *In Western Grid Development, LLC*, 130 FERC ¶ 61,056, at P 43 (2010), FERC held that an energy storage project was eligible for cost allocation as a wholesale transmission project because the manner in which the storage project functioned mimicked traditional transmission infrastructure.

FERC requires “comparable” consideration of NTAs

- FERC’s Order No. 1000 requires “comparable consideration of transmission and non-transmission alternatives in the regional transmission planning process.” 136 FERC 61,051, at P 155. ¶
- Order 1000 merely reiterated the principle of comparable consideration, which was already included in Order No. 890, and stems from the requirement that rates be just and reasonable.

Comparable consideration for NTAs

- Comparable \neq identical



- No NTAs project submitted to date
- Seeking input & feedback on this aspect from SERTP planners

Our focus in SERTP on types of projects with the most potential for NTAs

- Small projects with limited geographic scope (peninsulas or isolated areas are particularly good) –
 - have heard scale can be much larger than originally anticipated
- Load-related projects, storage
- Projects for which Tx infrastructure is particularly expensive

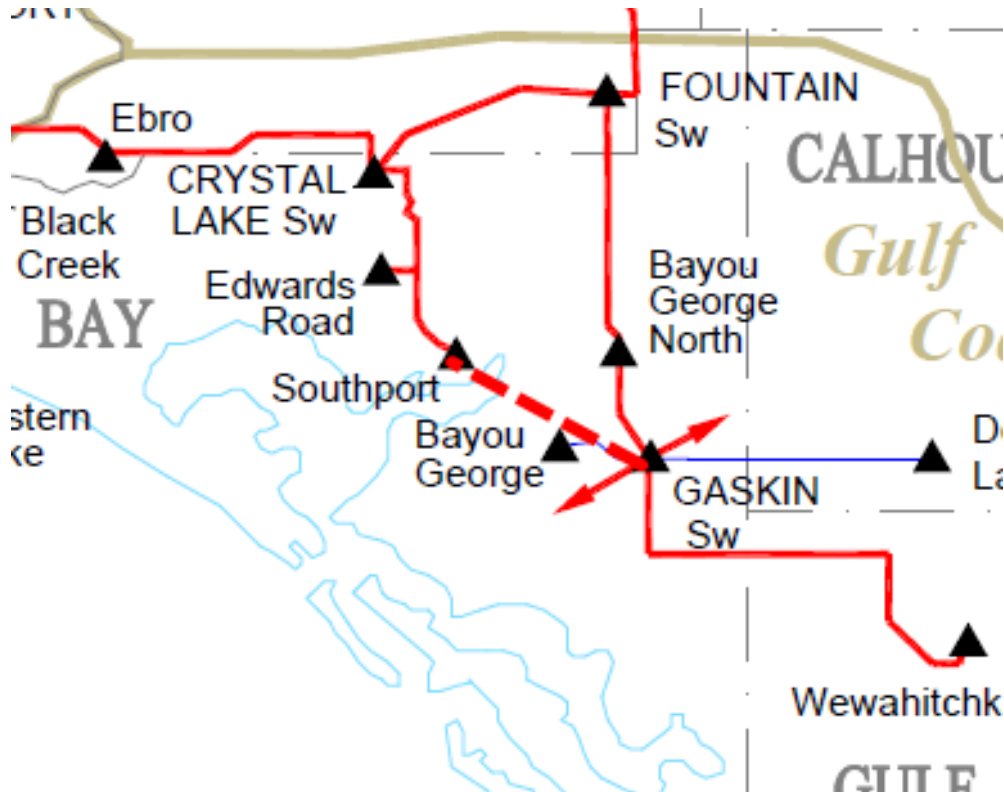
Finding a NTA: Identify a Project to Replace (Step 1)

- Initial Screening
 - Criteria on nature of the violation and of the project
- Load Flow Model Review and Analysis
 - Review under Normal Conditions
 - Contingency Analysis

Finding a NTA: Identify and Propose the Alternative (Steps 2 and 3)

- Construct a feasible NWS
 - Demand response options evaluated
 - Battery storage options evaluated
- Propose it to SERTP

Finding a NTA: Identify a Project to Replace (Step 1)



Candidate #1: GASKIN –
SOUTHPORT 115 KV T.L.

DESCRIPTION: Construct 9 miles of
new 115 kV transmission line from
Gaskin Switching Station– Southport
substation with 795 ACSR at 100°C.

SUPPORTING STATEMENT: Improve the
reliability of substations by providing a
looped service feed.

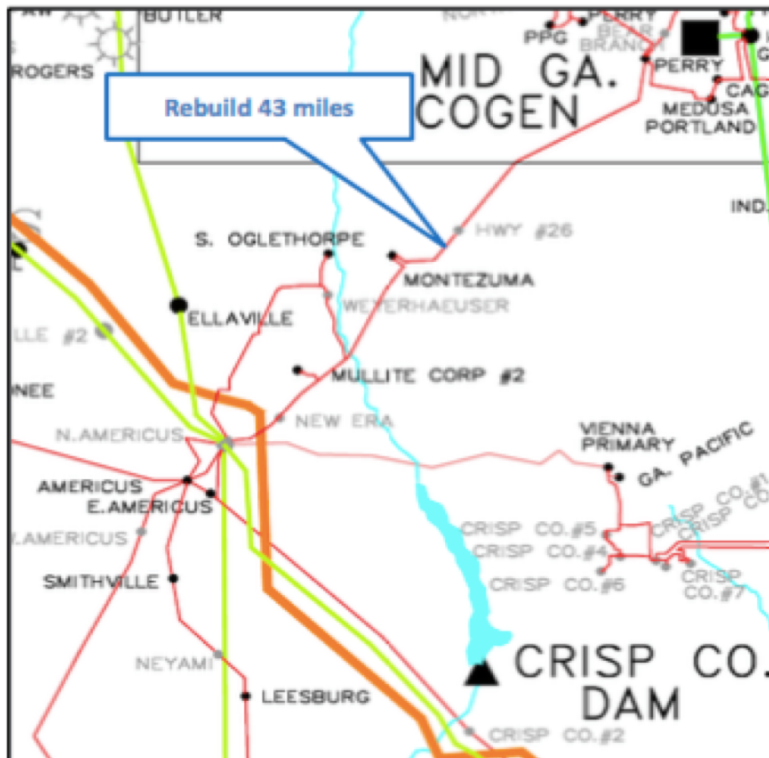
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Finding a NTA: Identify a Project to Replace (Step 1)

Candidate #2:

NORTH AMERICUS – PERRY 115 KV T.L.

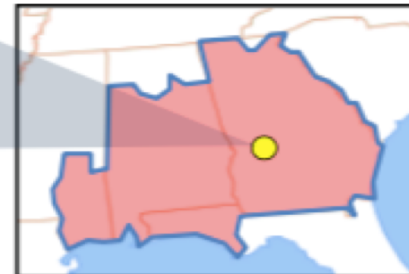


DESCRIPTION:

Rebuild approximately 43 miles of the existing 115 kV transmission line from North Americus to Perry substation with 795 ACSR at 100°C.

SUPPORTING STATEMENT:

The North Americus – Perry 115 kV transmission line overloads under contingency.



ect

Finding a NTA: Transmission Solutions with Storage

- N-1 Stability
 - Wisconsin Public Service/ American Transmission Co.
- Substation – Radial Line Upgrade
 - Presidio, Texas
- Fast Response to Transmission Trips
 - Illustrate added capacity on networks with storage
- Fast Response to Generator Trips
 - Modeling from Hawaii

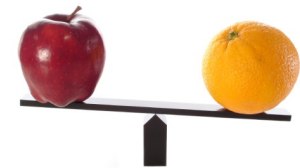
Barriers to comparable consideration of NTAs

- Technical
- Jurisdictional



Technical barriers to NTAs

- Modeling tools were developed with traditional transmission resources in mind, not NTAs
- Need to set up a framework for evaluating NTAs against traditional Tx infrastructure
- In many cases, necessary data is not accessible to non-transmission owning utilities and NTA developers



The data problem is particularly solvable

- SERTP should post data regarding specific Tx needs early in the planning process so that utilities and market actors can develop NTAs in response
- NTA developers tell us that info on magnitude, duration, frequency, precise location, and time of day, week and year of reliability needs would be very helpful

Jurisdictional barriers to NTAs



NTAs



states

- Cost allocation

What role should NTAs have in SERTP planning process?

- Accurately accounted for in load forecasts (in a location-specific manner)
- Comparably considered as alternatives to contracts for System Support Resources
- **Comparably considered as alternatives in SERTP's Transmission Expansion Plan**



Summation Slide

Thank you!

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