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# Improvements to Transmission Planning: ANOPR focus areas and interconnection reform

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Interconnection Process Workshop

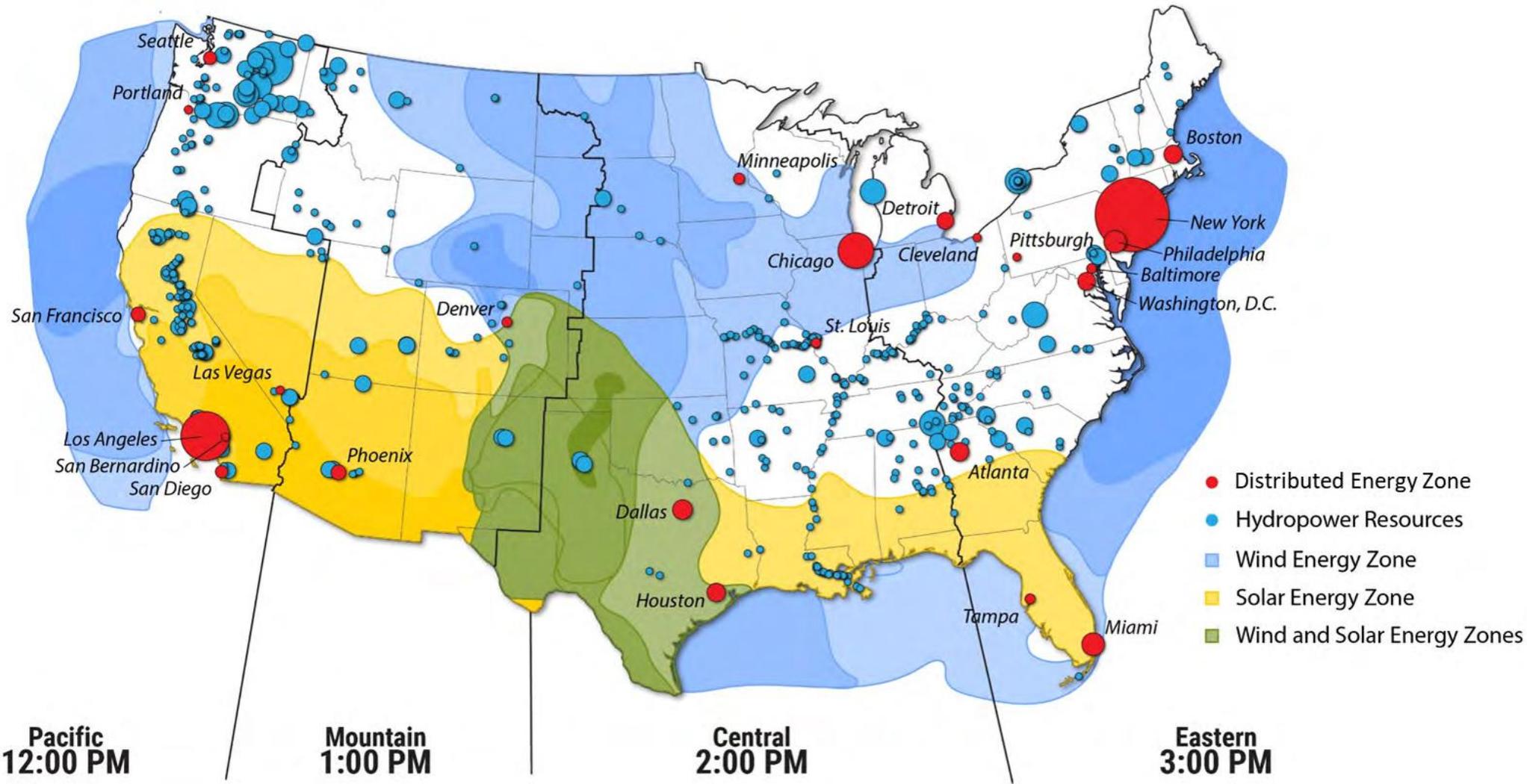
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# **ANOPR areas of focus**

- 1. Lack of effective inter-regional planning**
- 2. Regional planning that is not addressing future needs**
- 3. Identifying all benefits and cost allocation**
- 4. Governance and oversight**

# Need for National Transmission



Source: ESIG, [Transmission Planning for 100% Clean Electricity](#)

# Need for National Transmission

Study	Finding
MIT <a href="#">The Value of Inter-Regional Coordination and Transmission in Decarbonizing the US Electricity System</a> (2020)	“inter-state coordination and transmission expansion reduce the system cost of electricity in a 100%-renewable US power system by 46% compared with a state-by-state approach, from 135 \$/MWh to 73 \$/MWh”
MISO <a href="#">Renewable Integration Impact Assessment</a> (2021)	“[Approaching 50% RE] the current transmission infrastructure becomes unable to deliver energy to load...Given how much time is typically needed to build transmission, proactive planning is necessary”
NREL <a href="#">North American Renewable Integration Study</a> (2021)	Under 80% CO2 reduction by 2050, “Interregional transmission expansion achieves up to \$180 billion in net benefits.”
NREL <a href="#">HVDC Interconnection Seam Study</a> (2021)	HVDC between the Eastern and Western interconnections show B/C ratios up to 2.9, mostly through reduced generator operational costs.

...and many others

# Interregional Planning

- Current process appears focused on incremental improvements near seams, and not oriented towards identifying needs for large multi-regional projects.
- Tripple-hurdle requirement for joint approval results in very few interregional projects getting approved.
- We note wide gap between studies cited above and PJM's position that interregional transmission is adequate.
- Barriers to interregional coordination are not just in transmission planning, but may also stem from resource adequacy and market design.
- Consider whether joint planning or independent interregional planning would improve current situation.

# Regional Planning

ANOPR asks “whether the existing regional transmission planning and cost allocation processes fail to adequately account for anticipated future generation” and if this “results in inefficient investment.”

Possible areas of improvement:

- Planning for anticipated future generation scenarios
  - Can this improve interconnection?
  - PJM notes risks, but all planning is speculative. Straight-line extrapolation of the status quo is as uncertain as anything else, but may reduce moral hazard.
  - Process for identifying future gen pockets and handling risk need careful attention. States should have a large role here.
- Need for more integrated approach to regional projects.
  - Are we talking past each other on siloing? PJM seems to be responding that engineering studies are not siloed, but concern is with project identification and cost allocation.

# Cost Allocation

ANOPR affirms “beneficiary pays” approach, but questions if we are missing many benefits and correctly identifying beneficiaries.

- Economic benefits from new low-cost supply.
- Reliability benefits from transmission
  - Simple: lower capacity costs from increased CETL
  - Hard: improved reliability and resilience in extreme situations
- Carbon reduction. Recent [executive order](#) notes “An accurate social cost is essential for agencies to accurately determine the social benefits of reducing greenhouse gas emissions when conducting cost-benefit analyses of regulatory and other actions.” The current federal SCC corresponds to about \$23/MWh for carbon free energy in PJM.
- Criteria pollutants and effects on specific communities.

# Oversight and Governance

ANOPR is “considering whether reforms may be needed to enhance oversight of transmission planning and transmission providers’ pending on transmission facilities to ensure that transmission rates remain just and reasonable.”

Current planning has important conflicts of interest:

- Order 1000 links planning and competition, creating incentives to evade or undermine regional planning.
- RTO and non-RTO regions have different planning regimes. That combined with voluntary RTO membership weakens RTO independence and threatens rule arbitrage.
- Member-driven RTOs likely to resist competition from external resources.

Main concerns:

- Exceptions to regional planning and competition should not be standard practice. How can regional planning and prudence review of TO-initiated projects be reformed to improve current outcomes?
- How to strengthen regional planning in non-RTO regions and ensure independence of RTO planning?