WECC

RAC Forum on Long-term Transmission Planning

(FERC NOPR RM21-17-000)

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Disclaimer

- This is for information sharing purposes
- Each entity should perform its own due diligence to meet the requirements (once rule is issued)
- Not an exhaustive list of all topics in the NOPR

MISO MVP Process

- Benefits $2.20 to $3.40 per dollar
- 20-year planning
- Drivers:
  - Changing state laws for resource mix
  - Large generator interconnection requests
- Range of scenarios
- Portfolio of “no regrets”
- Reliability and economic benefits

Why this NOPR?

- Long-term transmission planning is not occurring in most regions on a consistent or regular basis
- Consumers may not be seeing:
  - Enhanced reliability
  - Improved resource adequacy
  - Access to lower cost and diverse resources
- Transmission needs met outside regional process
- Response to interconnection requests

What's Happening

- Interconnection costs are increasing
- Interconnecting costs are becoming higher percentage of generation cost
- In non-RTO/ISO regions, no project selected under regional transmission plan
- Local transmission planning
- Reforms are needed

What is FERC Looking For?

Public utility transmission providers engage in long-term transmission planning driven by changing resources and demand

Deficiencies in Existing Process

- Fail to require sufficiently long-term assessment
- Fail to adequately account for known determinants of needs
- Fail to consider broader set of benefits

What is Being Proposed?

- Reform regional planning:
  - Long-term scenarios (including extreme events)
  - Consider dynamic line ratings
  - Advanced power flow control devices
  - Cost allocation (state agreement)
- Adopt enhanced transparency and coordination

What is Being Proposed?

- In coordination with states:
  - Identify transmission needs through long-term scenarios
  - Evaluate benefits of regional transmission facilities (minimum 20 years)
  - Transparent and unduly discriminator criteria
- Consider dynamic line ratings and power flow control devices
- Portfolio approach
- Continue to rely on existing processes (reliability or economic)
- Use Long-Term Regional Planning (public policy)

What is Being Proposed?

- Can use a combined approach (reliability, economic and public policy)
- Continue to comply with Orders 890 and 1000

What Scenarios?

- Minimum 20 years
- Revise every three years
- Incorporate Commission-identified factors
- At least four plausible and diverse scenarios
- Best available data
- Consider whether to identify geographic zones with development potential

What Scenarios?

- Level and pattern of demand
- Location and type of resource additions
- Retirements
- Natural gas prices
- Outage trends (extreme weather and climate)

Factors

- Federal/state/local laws affecting resources and demand
- Federal/state/local clean energy laws
- State approved IRPs
- Trends in technology costs (electrification)
- Resource retirements
- Interconnection requests
- Utility, corporate, federal, state, and local energy/climate goals (allowed to discount)

Factors

- Climate risk
- Reliability/resilience against extreme weather
- Consider facilities identified as interconnection-related need but never built due to withdrawal of request

Scenarios Must…

- Be plausible
- Be diverse (distinct facilities or distinct benefits)
- Have publicly disclosed data inputs
- Include the opportunity for stakeholder input
- Account for high-impact, low-frequency events (at least one)

Identification of Geographic Zones

- Each public utility transmission provider as part of regional planning process should:
  - Consider stakeholder-input-specific geographic zones of new generation
  - Assess generation developers' interest in those geographic zones
  - Incorporate zones and commercial interest into scenarios
- Establish a method to select geographic zones
- Give stakeholders opportunity for input (including federal/state siting authorities)

Identification of Geographic Zones

- Modify geographic zones after input
- Publicly post geographic zones on OASIS
- Method to assess commercial interest in commercial zones:
  - Generation developers with existing resources within the zone
  - Number and size of interconnection requests
  - Developer leasing agreements
  - Letters of credit
  - Commitments to build transmission
  - Power purchase agreements
  - Any other factor of commercial interest

Identification of Geographic Zones

- Incorporate information into Long-term Scenarios

Regional Planning and Interconnection Coordination

- Consider regional transmission facilities identified multiple times to address interconnection-related needs
- Interconnect requests withdrawn due to transmission upgrade costs. Network upgrades don't happen. Same need appears in multiple cycles
- Transmission upgrade will benefit larger customer base than just the generators
- Reform to allow interconnection-related needs as part of long-term planning

Proposed Reform

- Consider in long-term planning facilities identified two times as interconnection-related need in the last five years
- Be at least 200 kV and/or cost at least $30 million
- Not being developed due to request withdrawal
- Need has not otherwise been addressed in executed agreement
- Interconnection requests be a “factor”
- Network upgrades may not be identical—Need is the same

Evaluation of Benefits

- Identify benefits, explanation of calculation of benefits, and explain how benefits will reflect the benefits of facilities
- Evaluate benefits in 20-year horizon starting from estimated in-service date
- Allow (but not require) evaluation of benefits of a portfolio of facilities
- Not require specific definition of benefits for evaluation
- Explain rationale for using certain benefits

Potential Benefits to Consider

Avoided or deferred reliability projects	Mitigation of weather/load uncertainty
Reduced loss of load probability	Capacity cost benefits
Reduced planning reserve margin	Deferred generation investment
Production cost savings	Access to lower cost generation
Reduced losses	Increased competition
Reduced congestion	Increased market liquidity
Mitigation of extreme events	

Selection Criteria

- Transparent and not unduly discriminatory
- Ensure efficient and cost-effective facilities
- Developed in consultation with relevant state entities

DLR and Advanced Power-Flow Control

- Consider DLR and advanced power-flow control
- For each transmission need, consider incorporating DLRs and advanced power-flow control into existing facilities
- Consider use of DLR and advanced power-flow control devices for proposed facilities

Review of Local Transmission Plans

- Doesn't include replacement of existing facilities
- Enhance transparency:
  - Criteria, models, assumptions
  - Local transmission needs
  - Potential local or regional facilities
- Hold at least three stakeholder meetings
- Meetings (assumptions, needs, solutions)

Review of Local Transmission Plans

- Evaluate replacement facilities (230 kV or above) within 10 years for “right-sizing”
- Transparency on which replacement facility is included for information and which one is for cost allocation

Interregional Coordination

- Apply interregional coordination procedures to Long-term Regional Transmission Planning
- Provide for:
  - Sharing of information regarding transmission needs and facilities in long-term planning
  - Joint evaluation of facilities
- Allow proposing interregional facility in regional process for long-term planning needs

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