

FERC Final Rule on Transmission Planning – Order No. 1920

NEPOOL Counsel Presentation to
Transmission Committee
May 16, 2024



Overview

- Transmission Planning Order No. 1920 issued in Docket RM21-17 on May 13, 2024 (approximately 1360 pages, including a concurring statement from Chairman Phillips and Commissioner Clements, and a 77-page strong dissent from Commissioner Christie). Includes pro forma Attachment K revisions.
- Order No. 1920 requires major new features for Long-Term Regional Transmission Planning and related cost allocation. Compliance filings due 10 months from effective date, which is 60 days after publication in Federal Register.
- Notably, the final rule does not require transmission providers to select any transmission facilities as part of Long-Term Regional Transmission Planning
- Note: this is a high-level presentation only- **much** more detail is in the order.

Overview of Order No. 1920

- **Covers the following main topics:**
 - Overall Need for reform
 - Long-Term Regional Transmission Planning (LTRTP)
 - Requirement to participate
 - Development of Long-Term Scenarios (LTS)
 - LTS requirements
 - Evaluation of the benefits of Long-Term Regional Transmission Facilities (LTRTF)
 - Evaluation and selection of LTRTF
 - Implementation of LTRTP
 - Coordination of Regional Transmission Planning and generator interconnection processes
 - Need for reform
 - Transmission Planning process evaluation
 - Qualifying Criteria

Overview of Order No. 1920

- Consideration of dynamic line ratings and advanced power flow control criteria
- Regional transmission cost allocation
 - Cost Allocation for Long-Term Regional Transmission Facilities
 - Long-Term Regional Transmission Facility Cost Allocation Compliance with the Existing Six Order No. 1000 Regional Cost Allocation Principles
 - Identification of Benefits Considered in Cost Allocation for Long-Term Regional Transmission Facilities
- Construction Work in Progress Incentive
- Exercise of a Federal Right of First Refusal in Commission-Jurisdictional Tariffs and Agreements
- Local Transmission Planning Inputs in the Regional Transmission Planning Process
 - Need for reform
 - Enhanced Transparency of Local Transmission Planning Inputs in the Regional Transmission Planning Process

Overview of Order No. 1920

- Identifying Potential Opportunities to Right-Size Replacement Transmission Facilities
- Interregional Transmission Coordination
- Compliance procedures
- Concurrence and dissent

Order No. 1920 – Overall Need for Reform

- Absence of sufficiently **long-term, forward-looking, and comprehensive** transmission planning requirements is causing transmission providers to fail to adequately anticipate and plan for future system conditions. PP 85-89.
- Failure to conduct long-term, comprehensive planning results in piecemeal upgrades to the transmission system. The result is less efficient and less cost-effective investment in transmission infrastructure, resulting in higher costs to customers. P 85.
- Due to this less efficient and cost-effective transmission planning, existing regional transmission planning and cost allocation requirements are unjust, unreasonable, and unduly discriminatory or preferential, and subject to reform by the Commission. PP 85-89

LTRTP – Requirement to Participate

- Requires transmission providers in each transmission planning region to participate in LTRTP. P 224. Long-term means a minimum 20-year planning horizon. There is a lengthy justification of the Commission's legal authority to adopt the LTRTP reforms at PP 253-283. Emphasis on transmission planning that is long-term, forward-looking and comprehensive. Emphasis also on process, not substantive outcomes in planning. PP 232, 266
- LTRTP must be consistent with the planning principles of Order Nos. 890 and 1000: (1) coordination; (2) openness; (3) transparency; (4) information exchange; (5) comparability; and (6) dispute resolution. P224 – Transmission providers should review past Order Nos. 890 and 1000 compliance filings. P 224
- Long-Term Regional Transmission Facility is a regional transmission facility that comes out of the LTRTP process. PP 250-251

LTRTP – Development of LTS

- Transmission providers must (1) develop and use LTS as part of LTRTP and (2) use those LTS to identify and evaluate Long-Term Regional Transmission Facilities needed to meet Long-Term Transmission Needs. P 298. LTS must be plausible and diverse scenarios. PP 412, 414.
- Long-Term Transmission Needs are transmission needs identified through LTRTP by, among other things, running LTS. Drivers of transmission needs are diverse and include, but are not limited to, evolving reliability concerns, changes in the resource mix, and changes in demand. P 299.
- Long-Term Scenarios are scenarios that incorporate various assumptions using **best available data** inputs about the future electric power system over a sufficiently long-term, forward-looking transmission planning horizon to identify Long-Term Transmission Needs and enable the identification and evaluation of transmission facilities to meet such transmission needs. P 302

LTRTP – LTS Requirements

- LTS must use minimum 20-year planning horizon (20 years or more from commencement of LTRTP cycle). P 344
- Transmission providers must assess and revise LTS at least once every 5 years.
 - Can be entirely new LTS or updates to existing LTS. P 377. Tied to timing of overall LTRTP process, which must conclude within 5 years of date it commences. P 378.
 - Despite 5-year interval for LTS, transmission providers must determine whether to select Long-Term Regional Transmission Facilities no later than three years from the date when the Long-Term Regional Transmission Planning cycle began.
 - Transmission providers can propose more frequent intervals for LTS and LTRTP.

LTRTP – LTS Requirements

- Transmission providers must include 7 specific factor categories in development of LTS: (much detail in order on the categories)
 - (1) federal, federally-recognized Tribal, state, and local laws and regulations affecting the resource mix and demand; (2) federal, federally-recognized Tribal, state, and local laws and regulations on decarbonization and electrification; (3) state-approved integrated resource plans and expected supply obligations for load-serving entities; (4) trends in fuel costs and in the cost, performance, and availability of generation, electric storage resources, and building and transportation electrification technologies; (5) resource retirements; (6) generator interconnection requests and withdrawals; and (7) utility and corporate commitments and federal, federally-recognized Tribal, state, and local policy goals that affect Long-Term Transmission Needs. P 409. There is a discussion of each of these factors at PP 422-484.
- All of these categories must be included in LTS, but others could be included so long as the LTS remain plausible. PP 411-412. Transmission providers retain discretion to determine how specific factors will affect Long-Term Transmission Needs. P 419.
- Use of factors not intended to require selection of particular solutions. P 419.

LTRTP – LTS Requirements

- **Treatment of factors:**
 - In first three categories Transmission providers must assume that legally binding obligations (i.e., federal, federally-recognized Tribal, state, and local laws and regulations) are followed, state-approved integrated resource plans are followed, and expected supply obligations for load-serving entities are fully met. Factors in these categories must not be discounted. P 507.
 - Open and transparent stakeholder process to be used for determination of factors to include in these first three factor categories. P 508.
 - Transmission providers have discretion in how to treat factors in last four categories with input from stakeholders in open and transparent process. P 516

LTRTP – LTS Requirement

- **Open and Transparent Stakeholder Process:**
 - Transmission providers must include in OATTs the open and transparent process for developing LTS, including factors to be included. P 528.
 - Transmission providers must post on OASIS or website a list of factors used, how they will be treated, how any factors will be discounted, and any factors not included. P 528. Need not post justification for any discounting of factors. P 536.
 - Stakeholders must have meaningful opportunity to provide timely input on how and what information to incorporate in LTS, including how to account for a specific factor in terms of how the factor may affect Long-Term Transmission Needs. P 529.
 - Despite stakeholder input, transmission providers have discretion regarding how to account for specific factors in their development of LTS or whether to include certain factors. PP 531, 537.

LTRTP – LTS Requirements

- **Number and development of LTS:**
 - At least once during the 5-year LTRTP cycle, transmission providers must develop at least 3 LTS that incorporate the 7 factor categories. Any base case must be consistent with what the transmission provider determines is the most likely scenario to occur. P 559.
 - Must use open and transparent process with stakeholder input. P 560.
 - States have particularly important role in development of LTS. Transmission providers should work with states in a way that reflects that role in addition to complying with the relevant stakeholder engagement and other requirements of the final rule. P 561.

LTRTP – LTS Requirements

- **Types of LTS:**

- The set of at least 3 LTS must be **plausible and diverse**: (1) plausible, meaning that each scenario must itself be reasonably probable, and collectively that the set of plausible scenarios must reasonably capture probable future outcomes, and (2) diverse, in the sense that transmission providers can distinguish distinct transmission facilities or distinct benefits of similar transmission facilities in each Long-Term Scenario. P 575.
- Diverse also means that the LTS represent a reasonable range of probable future outcomes consistent with the requirement for plausibility, based on assumptions about the factors and data inputs. P 576.
- The final rule does not require specific types of LTS, nor does it require transmission providers to develop low-, medium-, and high-level assumptions for the factors believed to be important except where transmission providers develop a base case scenario. P 577.

LTRTP – LTS Requirements

- **LTS Sensitivities for High-Impact, Low-Frequency Events:**
 - Transmission providers must develop at least one sensitivity, applied to each LTS, to account for uncertain operational outcomes that determine the benefits of and/or need for transmission facilities during multiple concurrent and sustained generation and/or transmission outages due to an extreme weather event across a wide area. P 593. Does not preclude use of additional sensitivities. P 597. Does not call out cyber-security events.
 - Transmission providers have flexibility to conduct this sensitivity for each LTS either before or after identifying potential regional transmission solutions to the Long-Term Transmission Needs identified using those LTS. P 594.
 - The sensitivities would change assumptions regarding concurrent generation and transmission outages during extreme weather events to create a “stress test” for each LTS. P 595.
 - Transmission providers can use sensitivities to determine the need for, benefit of, Interregional Transfer Capability. P 599.

LTRTP – LTS Requirements

- **Specificity of data inputs:**

- Transmission providers must use “best available data inputs” when developing LTS. These are defined as data inputs that are timely, developed using best practices and diverse and expert perspectives, and adopted via a process that satisfies the transmission planning principles of Order Nos. 890 and 1000. P 633.
- Transmission providers must update data inputs whenever they revise/update their LTS. P 633.
- Such data must also correspond to the list of factors used to determine Long-Term Transmission Needs. P 633.
- The open and transparent stakeholder process must be used to determine data inputs to be used in LTS. Order No. 890 dispute resolution can be used to dispute data inputs. P 634.
- Transmission providers have significant flexibility about which data inputs they use in LTS. P 638

LTRTP – LTS Requirements

- **Identification of geographic zones:**
 - The Commission declines to adopt the proposed requirement that each transmission provider, as part of its regional transmission planning process, consider whether to establish geographic zones within the transmission planning region that have the potential for development of large amounts of new generation. P 665.
 - Not necessary given requirement to consider the factors affecting supply and demand. P 665.
 - Although not a requirement, the Commission encourages transmission providers to consider geographic zones that have the potential for development of large amounts of new generation as part of their regional transmission planning process. P 666.

LTRTP – Evaluation of Benefits of LTRTF

- **Requirement to use a set of 7 required benefits:**
 - Transmission providers must use a set of 7 required benefits for evaluation of LTRTF under each LTS. The 7 required benefits are: (1) avoided or deferred reliability transmission facilities and aging infrastructure replacement; (2) a benefit that can be characterized and measured as either reduced loss of load probability or reduced planning reserve margin; (3) production cost savings; (4) reduced transmission energy losses; (5) reduced congestion due to transmission outages; (6) mitigation of extreme weather events and unexpected system conditions; and (7) capacity cost benefits from reduced peak energy losses. PP 719-720. Note: each of these categories discussed in the order at PP 740-819.
 - To ensure just and reasonable rates transmission providers must measure the benefits and use them in selection of any LTRTF. Using this set of benefits will help ensure more efficient and cost-effective solutions. PP 722-723. Use of common set of benefits will help ensure cost allocation to beneficiaries in a manner that is roughly commensurate with benefits from LTRTF. P 723.
 - Use of the required set does not mean all benefits are created equal. Transmission providers' use of benefits can reflect regional preferences. P 734.

LTRTP – Evaluation of Benefits of LTRTF

- **Requirement to use a set of 7 required benefits:**
 - Transmission providers have flexibility to develop methods of measuring benefits to avoid double-counting where benefits are redundant. P 735.
 - Benefits must be measured by individual category and not be combined. P 736.
 - Transmission providers may use additional benefits, including others specified in the NOPR, so long as they do so in a manner that is consistent Order Nos. 890 and Order No. 1000 transmission planning principles. PP 729, 737.
 - Screening approach that uses a screening approach to initially screen benefit categories for significance not allowed. P 739.
 - The Commission declines to require use of other benefits, such as were proposed in the NOPR: mitigation of weather and load uncertainty, deferred generation capacity investments, access to lower cost generation, increased competition, and increased market liquidity. Not necessary to ensure just and reasonable rates given the required categories of benefits. PP 820-821.

LTRTP – Evaluation of Benefits of LTRTF

- **Identification, measurement and evaluation of the benefits of LTRTF:**
 - Transmission providers must include in their OATTs a general description of how they will measure each of the seven benefits included in the required set of benefits. P 837. The description for each required benefit in the OATT must only be sufficient to enable stakeholders to understand the manner by which transmission providers will measure these benefits. P 840.
 - Transmission providers have flexibility to specify the method for measuring each of the 7 required benefits. P 839.
 - The Commission declines to define “benefits” or “beneficiaries”. P 902.

LTRTP – Evaluation of Benefits of LTRTF

- **Evaluation of benefits over a longer time horizon:**
 - Transmission providers must calculate the benefits of LTRTF over a time horizon that covers, at a minimum, 20 years starting from the estimated in-service date of the transmission facilities, and this minimum 20-year benefit horizon must be used both for the evaluation and selection of LTRTF. Same time horizon not required for cost allocation purposes. P 859. A longer time horizon could be used. P 867. Concerns about future uncertainty regarding benefits can be addressed through discounting factors in categories 4-7 used in the LTS. P 865.

- **Evaluation of the benefits of portfolios of LTRTF:**
 - The final rule allows, but does not require, use of a portfolio approach to evaluating benefits, and may use either or both facility-by-facility and portfolio approaches within the same LTRTP cycle. P 889.

LTRTP – Evaluation and Selection of LTRTF

- **Requirement to adopt an evaluation process/selection criteria:**
 - Transmission providers must include in their OATTs an evaluation process, including selection criteria, that they will use to identify and evaluate LTRTF for potential selection to address Long-Term Transmission Needs. P 911.
 - The transmission developer of a selected LTRTF will be eligible to use the applicable cost allocation method. P 912.
 - Transmission providers may propose to use existing evaluation and selection processes and criteria but must justify them under the final rule. P 915.
 - Evaluation process must: (1) identify LTRTF that address Long-Term Transmission Needs; (2) measure the benefits of the identified LTRTF consistent with the final rule requirements; and (3) designate a point in the evaluation process at which transmission providers will determine whether to select or not select identified LTRTF in the regional transmission plan for purposes of cost allocation. P 916.

LTRTP – Evaluation and Selection of LTRTF

- **Requirement to adopt an evaluation process/selection criteria:**
 - Selection criteria to be developed with stakeholder input. P 916.
 - No requirement to select any particular LTRTF. P 916. Selection does not entitle the transmission developer to site and construct the transmission facility and does not override other federal, state and local for siting and construction. P 917.
 - Consistent with the Commission's rule of reason, transmission providers' evaluation processes and selection criteria significantly affect rates, are reasonably susceptible to specification, and are not otherwise so generally understood as to render their recitation superfluous and therefore must be included in their OATTs. P 918.

LTRTP – Evaluation and Selection of LTRTF

- **Flexibility:**

- Transmission providers in each transmission planning region, after consultation with Relevant State Entities and other stakeholders, have flexibility to propose evaluation processes, including selection criteria, that they believe will ensure that more efficient or cost-effective Long-Term Regional Transmission Facilities are selected to address the transmission planning region's Long-Term Transmission Needs. P 924.
- Transmission providers make the selection decisions in LTRTP. P 926.

- **Minimum requirements:**

- Transmission providers' evaluation of transmission facilities must culminate in a determination that is sufficiently detailed for stakeholders to understand why a particular LTRTF (or portfolio of such Facilities) was selected or not selected. P 954
- Determination of selection must include measured benefits. P 954.

LTRTP – Evaluation and Selection of LTRTF

- **Minimum requirements:**

- Evaluation and selection must aim to ensure selection of more efficient and cost-effective LTRTF through transmission providers: (i) allowing nonincumbent transmission developers to propose transmission facilities; (ii) estimating the costs and measuring the benefits of LTRTF proposed for selection; (iii) identifying a point in the process at which a decision to select or not select will be made, not later than 3 years following the beginning of the LTRTP cycle; and providing a detailed explanation of selection or non-selection. P 955.
- Transmission providers may not impose as a selection criterion a minimum benefit-cost ratio that is higher than 1.25-to-1.00. P 958.
- Transmission providers not required to account for siting considerations, or environmental justice considerations in evaluation and selection. P 959-960. Qualitative considerations ok to use. PP 961-962
- Transmission providers not required to include selection criteria proposed by state entities, but may include them subject to being consistent with final rule. P 963.

LTRTP – Evaluation and Selection of LTRTF

- **Maximize benefits:**

- Transmission providers must propose evaluation processes, including selection criteria, that seek to maximize benefits *accounting for costs* over time without over-building transmission facilities. P 964. “Over-building” not defined. P 969.
- Transmission providers must use the set of 7 required benefits to measure and evaluate benefits. P 965. Must not disregard benefits that occur only under limited system conditions, such as extreme weather, but could assign appropriate weight to them in evaluation. P 965. Selection or non-selection must be supported by estimated costs and measured benefits. P 966. May not require LTRTF to meet selection criteria in every LTS. P 968.
- Transmission providers could adopt evaluation processes and selection criteria that would allow transmission providers to make selection decisions while minimizing the future risk, such as a “no regrets” approach. P 967
- Need not select non-transmission alternatives with lower cost than alternative LTRTF. P 970.

LTRTP – Evaluation and Selection of LTRTF

■ Role of Relevant State Entities:

- Relevant State Entity is any state entity responsible for electric utility regulation or siting electric transmission facilities within the state or portion of a state located in the transmission planning region, including any state entity as may be designated for that purpose by the law of such state. P 44.
- Transmission providers must consult with and seek support from Relevant State Entities on evaluation and selection process proposal. P 994. Need not obtain support. P 996. This is in addition to obligation to seek stakeholder input. P 1000. Public power/load-serving entities not on par with Relevant State Entities. P 1001.
- Transmission providers retain ultimate responsibility for regional transmission planning, including LTRTP, as well as complying with the obligations of the final rule. P 996.
- Transmission providers, not Relevant State Entities, must determine whether or not to select LTRTF to meet Long-Term Transmission Needs. P 1002.

LTRTP – Evaluation and Selection of LTRTF

- **Voluntary funding opportunities:**

- Transmission providers must include in their OATTs a process to provide Relevant State Entities and interconnection customers with the opportunity to voluntarily fund the cost of, or a portion of the cost of, an LTRTF that otherwise would not meet the transmission providers' selection criteria. P 1012.
- Process proposed must include provisions that describe: (1) the process by which the transmission providers will make voluntary funding opportunities available to Relevant State Entities and interconnection customers, which must ensure that Relevant State Entities and interconnection customers receive timely notice of such opportunities and provide a meaningful opportunity for Relevant State Entities and interconnection customers; (2) the period during which Relevant State Entities and interconnection customers may exercise the option to provide voluntary funding; (3) the method that transmission providers will use to determine the amount of voluntary funding required to ensure that the Long-Term Regional Transmission Facility meets the transmission providers' selection criteria; and (4) the mechanism through which transmission providers and Relevant State Entities or interconnection customers will memorialize any voluntary funding agreement, e.g., a pro forma agreement in the OATT. P 1013.

LTRTP – Evaluation and Selection of LTRTF

- **Voluntary funding opportunities:**

- Any portion of costs not voluntarily funded are allocated according to normal cost allocation method or State Agreement Process. P 1013.
- The Commission declines to require transmission providers to allow voluntary funding opportunities to expand an LTRTF beyond what was identified through the LTRTP process. Nothing in the final rule prohibits this approach, which could be proposed in a Section 205 filing. P 1017.
- No specific requirement to file pro forma agreements for voluntary funding. P 1018.

- **No selection requirement:**

- Transmission providers **not required to select** any particular Long-Term Regional Transmission Facility—even where a particular transmission facility meets the transmission providers' selection criteria in their OATTs. P 1026. Final rule does not prohibit transmission providers from proposing such a requirement. P 1028.

LTRTP – Evaluation and Selection of LTRTF

■ **Reevaluation:**

- Transmission providers must include in their OATTs provisions that require them—in certain circumstances—to reevaluate LTRTF that previously were selected. P 1048. Further discussion on reevaluation at PP 1053-1061.
- Reevaluation to occur in the following three situations, subject to limitations discussed in the final rule: (1) delays in the development of a previously selected LTRTF would jeopardize a transmission provider's ability to meet its reliability needs or reliability-related service obligations; (2) the actual or projected costs of a previously selected LTRTF significantly exceed cost estimates used in the selection of an LTRTF; or (3) significant changes in federal, federally-recognized Tribal, state, or local laws or regulations cause reasonable concern that a previously selected LTRTF may no longer meet the transmission providers' selection criteria. P 1049.
- Transmission providers must include specific criteria in their OATTs that they will use to determine when one of these three situations occurs, thereby triggering the reevaluation. P 1050. Flexibility to propose criteria.

LTRTP - Implementation

- **Initial timing:**

- Transmission providers must explain on compliance how the initial timing sequence for Long-Term Regional Transmission Planning interacts with existing regional transmission planning processes. P 1071. Transmission providers must also address the possible displacement of regional transmission facilities from the existing regional transmission planning processes. P 1071.
- Transmission providers have flexibility to integrate the new LTRTP process with the existing planning process in a way that mitigates the potential for disruption of the existing process. P 1072. May propose the date for commencement of LTRTP process so long as it is within 1 year from date compliance filings are due. P 1072.

- **Periodic forums:**

- The Commission will organize periodic forums for transmission providers, transmission experts, relevant federal and state agencies, and other stakeholders to share best practices in implementing LTRTP.

Coordination of Planning and Interconnection Process

- The Commission finds that the lack of coordination between transmission planning and generator interconnection results in interconnection-related transmission being built that is not more efficient or cost-effective, and does not ensure just and reasonable rates. Therefore, the Commission directs certain reforms. P 1100.
- Transmission providers must revise the regional transmission planning processes in their OATTs, consistent with the requirements in the final rule, to evaluate for selection of regional transmission facilities that address certain identified interconnection-related transmission needs associated with certain interconnection-related network upgrades originally identified through the generator interconnection process. P 1106. This coordination would be done in existing planning processes rather than the LTRTP. P 1107. Transmission providers have flexibility in proposing evaluation methods and selection criteria. P 1111. Does not require change to existing cost allocation processes. P 1117.
- The final rule requires that an interconnection-related network upgrade associated with identified interconnection-related transmission needs must satisfy both the minimum cost and voltage criteria proposed in the NOPR to qualify for evaluation for selection (at least \$30M in cost and minimum voltage of 200 kV). P 1107.

Coordination of Planning and Interconnection Process

- **Transmission planning process evaluation:**
 - Transmission providers must evaluate regional transmission facilities that address certain interconnection-related transmission needs in their existing Order No. 1000 regional transmission planning and cost allocation processes instead of in LTRTP. This requirement allows for current needs to be addressed in the near-term in the existing regional transmission planning processes. P 1126.
 - Future interconnection-related needs will be addressed in the LTRTP through use of certain of the factor categories (specifically 1, 2, 6 and 7) in the LTS development. P 1127.

Coordination of Planning and Interconnection Process

- **Qualifying criteria for transmission provider to use in planning to address interconnection-related transmission needs:**
 - (1) the transmission provider has identified interconnection-related network upgrades in interconnection studies to address those interconnection-related transmission needs in at least two interconnection queue cycles (**or individual interconnection studies**) during the preceding five years (looking back from the effective date of the Commission-accepted tariff provisions proposed to comply with this reform, and the later-in-time withdrawn interconnection request occurring after the effective date of the Commission-accepted tariff provisions);
 - (2) an interconnection-related network upgrade identified to meet those interconnection-related transmission needs has a voltage of at least 200 kV and an estimated cost of at least \$30 million;
 - (3) such interconnection-related network upgrade(s) have not been developed and are not currently planned to be developed because the interconnection request(s) driving the need for the network upgrade(s) has been withdrawn; and
 - (4) the transmission provider has not identified an interconnection-related network upgrade to address the relevant interconnection-related transmission need in an executed generator interconnection agreement or in a generator interconnection agreement that the interconnection customer requested that the transmission provider file unexecuted with the Commission. P 1145.

Consideration of Dynamic Line Ratings and Advanced Power Flow Control Devices

- Transmission planning regions must consider, in Long-Term Regional Transmission Planning and existing Order No. 1000 regional transmission planning processes, dynamic line ratings, advanced power flow control devices, advanced conductors and transmission switching for each identified transmission need and upgrades. P 1198
 - Selection and use of alternative technology should be treated as an upgrade. P 1202
 - FERC declined to add storage that performs a transmission function and topology optimization to the list of advanced technologies under this rule. P 1244.
- Evaluation of alternative transmission technologies must be consistent with each transmission providers' evaluation of transmission solutions in their OATTs and in the same manner that they evaluate any Long-Term Regional Transmission Facility. P 1199
- Both incumbent and non-incumbent transmission providers may use the applicable regional cost allocation method for deployment of any alternative transmission technology selected to be incorporated in a regional transmission facility. P 1203.

Consideration of Dynamic Line Ratings and Advanced Power Flow Control Devices

- FERC declined to mandate further details on how transmission providers should evaluate alternative transmission technologies as more efficient or cost-effective solutions. P 1210.
- Transmission providers are required to update their energy management systems, if needed to implement dynamic line ratings or other alternative transmission technologies. P 1215.

Regional Transmission Cost Allocation

- **For LTRTF:** TPs required to file one or more ex ante cost allocation methods that apply to selected LTRTF. P 1291
- Definition of **Long-Term Regional Cost Allocation Method** as an “*ex ante* regional cost allocation method for one or more Long-Term Regional Transmission Facilities (or a portfolio of such Facilities) that are selected in the regional transmission plan for the purposes of cost allocation.” P 1291.
 - The cost allocation method must ensure that costs are allocated in a manner that is at least roughly commensurate with the estimated benefits of the facility. P 1305
- **State Agreement Approach:** FERC is permitting TPs to include a State Agreement Process in the OATT to determine cost allocation methods, but State Agreement Approach cannot be the sole method for cost allocation for LTRTF. P 1292.
- Cost allocation Reforms in the Final Rule apply only to *new* LTRTF, no applicability to regional reliability and economic transmission facilities selected pursuant to existing Order No. 1000 regional transmission planning process. P 1300

Regional Transmission Cost Allocation

- **State Agreement Approach:** Declined to adopt NOPR proposal to require TPs to seek agreement of Relevant State Entities. Instead, established a six-month Engagement Period during which TPs must:
 - (1) provide notice of the starting and end dates for the six-month time period;
 - (2) post contact information that Relevant State Entities may use to communicate with TPs about any agreement among Relevant State Entities on a Long-Term Regional Transmission Cost Allocation Method(s) and/or a State Agreement Process, as well as a deadline for communicating such agreement; and
 - (3) provide a forum for negotiation of a Long-Term Regional Transmission Cost Allocation Method(s) and/or State Agreement Process that enables meaningful participation by Relevant State Entities. P 1354.
- Relevant State Entities are defined as any state entity responsible for electric utility regulation or siting electric transmission facilities within the state or portion of a state located in the transmission planning region including any state entity as may be designated for that purpose by the law of such state. P 1355.

Regional Transmission Cost Allocation

- **State Agreement Approach, cont.:** If Relevant State Entities agree on a Long-Term Regional Transmission Cost Allocation Method and/or State Agreement Process and provide that process within the required timeframe, the TP *may* (but are not required to) file the agreed-to cost allocation method on compliance. However, the ultimate decision as to whether to file a Long-Term Regional Cost Allocation Method and/or State Agreement Process to which Relevant State Entities have agreed will continue to lie with the TP. P 1355, 1402.
- State Agreement Approach defined as a process by which one or more Relevant State Entities may voluntarily agree to a cost allocation method for Long-Term Regional Transmission Facilities (or a portfolio of such Facilities) either before or no later than six months after the facilities are selected in the regional transmission plan for purposes of cost allocation. P 1402.

Regional Transmission Cost Allocation

- FERC adopts the NOPR proposal, with modification to require Long-Term Regional Transmission Cost Allocation Methods to comply with five of the six existing Order No. 1000 regional cost allocation principles:
 - (1) The costs of selected transmission facilities must be allocated to those within the transmission planning region that benefit from those facilities in a manner that is at least roughly commensurate with estimated benefits
 - (2) those that receive no benefit from transmission facilities, either at present or in a likely future scenario, must not be involuntarily allocated any of the costs of those transmission facilities;
 - (3) a benefit to cost threshold ratio, if adopted, cannot exceed 1.25 to 1;
 - (4) costs must be allocated solely within the transmission planning region unless another entity outside the region voluntarily assumes a portion of those costs;
 - (5) the method for determining benefits and identifying beneficiaries must be transparent. P 1471.
- Not required to comply if (1) Relevant State Entities indicate that they agree to that method as part of the Engagement Period; (2) State Agreement Process applies. P 1470.

Regional Transmission Cost Allocation

- FERC declined to adopt NOPR proposal to require TPs to identify on compliance the benefits that they will use in Long-Term Regional Transmission Cost Allocation Methods, how they will calculate those benefits, and how the benefits will reasonably reflect the benefits of regional transmission facilities to meet identified transmission needs driven by changes in the resource mix and demand. P 1505.
- FERC declined to adopt a particular time frame for determining the cost allocation for a Long-Term Regional Transmission Facility but opted to retain regional flexibility. P 1521.

Construction Work in Progress Incentive (CWIP)

- FERC declined to limit the availability of the CWIP Incentive for Long-Term Regional Transmission Facilities at this time because it agreed that any action on CWIP is more appropriately considered in a separate proceeding evaluating all transmission incentives comprehensively. P 1547.

Federal Right of First Refusal

- FERC declined to adopt the NOPR proposal and stated that the Commission would continue to consider the NOPR proposal (to allow for incumbent transmission providers to have a federal ROFR, conditioned on establishing joint ownership) in other proceedings. P 1563
- No changes to Order No. 1000's nonincumbent transmission developer reforms. P 1563

Local Transmission Planning Inputs in the Regional Transmission Planning Process

- FERC adopted with certain modifications, the two reforms that the Commission identified in the NOPR:
 - (1) enhance the transparency of local transmission planning processes; and
 - (2) require transmission providers to evaluate whether transmission facilities that need replacing can be “right-sized” to more efficiently or cost-effectively address Long-Term Transmission Needs identified in Long-Term Regional Transmission Planning. P 1577
- Transmission Providers are required to publicly post the following in an effort for more transparency:
 - (1) the criteria, models, and assumptions that they use in their local transmission planning process;
 - (2) the local transmission needs that they identify through the local transmission planning process; and
 - (3) the potential local or regional transmission facilities that they will evaluate to address those local transmission needs. P 1625
- Transparency requirement does not apply to asset management projects. P 1625

Local Transmission Planning Inputs in the Regional Transmission Planning Process

- Transmission Providers are required to hold three publicly-noticed stakeholder meetings:
 - Assumptions Meeting
 - meeting to review the criteria, assumptions, and models related to each transmission provider's local transmission planning P 1627
 - Needs Meeting
 - Must be held no fewer than 25 calendar days after Assumptions Meeting
 - meeting to review identified reliability criteria violations and other transmission needs that drive the need for local transmission facilities. P 1627
 - Solutions Meeting
 - Must be held no fewer than 25 calendar days after Needs Meeting
 - meeting to review potential solutions to those reliability criteria violations and other transmission needs P 1627
- All materials for these meetings must be posted publicly at least 5 calendar days before and after each meeting to submit comments. P 1627.
- FERC declined to set bright-line rule that transmission providers must respond to each and every question or comment received through the stakeholder process, but required that transmission providers respond to questions or comments in a manner that allows stakeholders to meaningfully participate in these stakeholder meetings. P 1656.

Local Transmission Planning Inputs in the Regional Transmission Planning Process

- **Right Sizing:** TPs are required to evaluate whether transmission facilities are:
 - (1) operating above a specified kV (must not exceed 200 kV) threshold and
 - (2) that an individual transmission provider that owns the transmission facility anticipates replacing in-kind with a new transmission facility during the next 10 years can be “right-sized” to more efficiently or cost-effectively address a Long-Term Transmission Need as part of each Long-Term Regional Transmission Planning Cycle. P 1677
- “Right-Sizing” is the process of modifying a transmission provider’s in-kind replacement of an existing transmission facility to increase that facility’s transfer capability. P 1678
- “In-Kind Replacement Transmission Facility” is a new transmission facility that:
 - (1) would replace an existing transmission facility that a transmission provider has identified in its in-kind replacement estimate as needing to be replaced;
 - (2) would result in no more than an incidental increase in capacity over the existing transmission facility identified as needing to be replaced; and
 - (3) is located in the same general route as, and/or uses the existing rights-of-way of, the existing transmission facility identified as needing to be replaced. P 1678.
- Each TP must submit its in-kind replacement estimates (i.e., estimates of the transmission facilities operating at and above the specified kV threshold that an individual transmission provider that owns the transmission facility anticipates replacing in-kind with a new transmission facility during the next 10 years). P 1677.

Local Transmission Planning Inputs in the Regional Transmission Planning Process

- **ROFR:** FERC adopted NOPR proposal to require the establishment of a federal right of first refusal for a right-sized replacement transmission facility that is selected to meet Long-Term Transmission Needs
- Allows TP to propose cost allocation method for selected right-sized replacement transmission facilities. TP must demonstrate that the cost allocation method is just and reasonable. P1716.
- To the extent that transmission providers propose to allocate the costs of right-sized replacement transmission facilities pursuant to the cost allocation method described in the NOPR, FERC required that the transmission providers explain on compliance:
 - (1) the method used to determine the portion of the costs of a right-sized replacement transmission facility that is incremental to the costs that would have been incurred for the underlying in-kind replacement transmission facility, and
 - (2) the method by which they will track the portion of costs over time that are allocated in accordance with the Long-Term Regional Transmission Cost Allocation Method (or, if adopted, subject to a State Agreement Process), as well as the portion of costs that would have been allocated pursuant to the cost allocation method that otherwise would have applied to the in-kind replacement transmission facility. P 1719

Interregional Transmission Coordination

- The Commission adopts the proposal to require TPs in each transmission planning region to revise their existing interregional transmission coordination procedures to reflect the Long-Term Regional Transmission Planning reforms from Order No. 1920. P 1751. Revised Tariffs must account for:
 - (1) the sharing of information regarding their respective Long-Term Transmission Needs, as well as Long-Term Regional Transmission Facilities to meet those needs; and
 - (2) the identification and joint evaluation of interregional transmission facilities that may be more efficient or cost-effective transmission facilities to address Long-Term Transmission Needs. P 1751.
- TPs in neighboring transmission planning regions must revise interregional transmission coordination procedures to allow an entity to propose an interregional transmission facility in the regional transmission planning process as a potential solution to Long-Term Transmission Needs. P 1752

Interregional Transmission Coordination

- TPs also required to provide the following additional information concerning Long-Term Regional Transmission Planning on their public website or through email lists:
 - (1) the Long-Term Transmission Needs discussed in the interregional transmission coordination meetings; (2) any interregional transmission facilities proposed or identified in response to Long-Term Transmission Needs; (3) the voltage level, estimated cost, and estimated in-service date of the interregional transmission facilities proposed or identified as part of Long-Term Regional Transmission Planning; (4) the results of any cost-benefit evaluation of such interregional transmission facilities, with such results including both any overall benefits identified (which may occur across multiple transmission planning regions), as well as any benefits particular to each transmission planning region; and (5) the interregional transmission facilities, if any, selected to meet Long-Term Transmission Needs. P 1753
- Declined to require TPs in neighboring regions to hold forums for stakeholders to discuss right sizing or expanding proposed regional transmission facilities. P 1755.
- Subject to 12-month compliance deadline. P 1770.

Compliance Procedures

- Transmission providers must submit compliance filings within ten months of the effective date of the final rule (which will be 60 days after publication in the Federal Register) revising their OATTs and other document(s) subject to the Commission's jurisdiction as necessary to demonstrate that it meets all of the requirements adopted in this final rule, except those adopted in the Interregional Transmission Coordination section of this final rule. P 1768.
- Transmission Providers must propose on compliance a date, no later than one year from the date on which initial filings to comply with the final rule are due, on which they will commence the first LTRTP cycle. P 1768. The proposed effective date for OATT revisions must be a date no later than the date of commencement of LTRTP cycle.
- Each TP shall also submit a separate compliance filing within 12 months of the effective date of the final rule revising the OATT and other document(s) as necessary to demonstrate that it meets the interregional transmission coordination requirements adopted in this final rule. P 1770.
- Declined request to apply the Independent Entity Variation standard rather than the "consistent with or superior to" standard for proposed deviations. P 1773.

Concurrence

- Commissioners Phillips and Clements emphasized that the Final Rule is a *reliability* imperative and an *affordability* imperative. P 1
- Failure to act would hamper the reliability and resilience of the electric grid while leaving customers “holding the bag” for the inevitably more costly upgrades in the future. P 4

Dissent

- Commissioner Christie provided a very strongly worded 77-page dissent to the final rule. A few samples:
- “This final rule, however, fails to fulfill the Commission’s consumer protection duty required by the statute. The final rule should be seen for what it is: a pretext to enact, through administrative action, a sweeping legislative and policy agenda that Congress never passed. The final rule claims statutory authority the Commission does not have to issue an absurdly complex bureaucratic blizzard of mandates and micromanagement to be imposed on every transmission provider in the United States for the transparent goal of spending trillions of consumers’ dollars on transmission not to serve consumers in accordance with the FPA, but instead to serve political, corporate, and other special-interest agendas that were never enacted into law. The rates for transmission that will result from the final rule will not only be unjust, unreasonable, unduly discriminatory and preferential, but grossly unfair to tens of millions of American consumers already burdened with rapidly growing monthly power bills.” Dissent at 1-2

Dissent

- “In truly Kafkaesque fashion, the final rule is a doorstopper weighing in at just below 1300 pages, likely one of the longest, most complicated, and confusing orders the Commission has ever issued. Regulated entities—it applies to all public utility transmission providers in the United States, RTO and non-RTO—will need weeks just to read through it, much less decipher it, and then months of figuring out how to comply. Its very complexity raises the prospect of multiple rounds of compliance filings, no doubt punctuated by multiple deficiency letters, in order to push the transmission provider towards the outcomes the Commission wants to achieve. The final rule’s very complexity renders it, if not arbitrary and capricious on its face, likely to be arbitrary and capricious in its enforcement.” At n. 4
- The final rule is contrary to the principles of the Federal Power Act of providing reliable power at least cost. Instead, “the final rule inflicts staggering costs on consumers by promoting the construction of trillions of dollars of transmission projects, not to serve consumers in accordance with the FPA, but to serve a major policy agenda never passed by Congress, to serve the profit-making interests of developers of politically preferred generation, primarily wind and solar, and to serve corporate “green energy” preferential purchasing policies.” At 4-5
- Not reasoned decision-making. Should receive not “a shred of deference.” At 5

Questions/Contact

- If you have any questions or comments about Order No. 1920, please contact:
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