



Order No. 1920

(Issued May 13, 2024)

Building for the Future Through Electric Regional Transmission Planning and Cost Allocation

Docket No. RM21-17-000



Disclaimers

- To facilitate understanding and discussion, this presentation simplifies or summarizes some of the reforms in Order No. 1920
- Any opinions expressed in this presentation are the presenters' own, and do not necessarily represent the views of the Federal Energy Regulatory Commission or any Commissioner



Presentation Outline

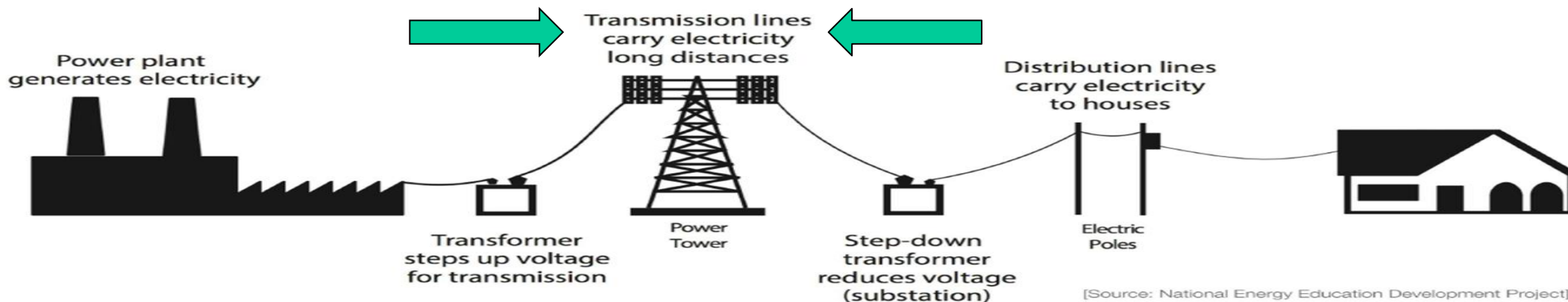
- I. Transmission planning and cost allocations basics
- II. Historical framework of FERC's transmission planning reforms, and deficiencies in existing transmission planning and cost allocation processes
- III. Order No. 1920 rulemaking process, and roadmap of major reforms established by Order No. 1920
- IV. Long-term regional transmission planning reforms
 - I. Long-term scenarios
 - II. Using benefits in long-term regional transmission planning
 - III. Evaluation and selection of long-term regional transmission facilities
- V. Additional reforms to improve efficiencies and accommodate alternative transmission technologies
- VI. Enhanced transparency of local transmission planning inputs
- VII. Opportunities to right-size replacement transmission facilities
- VIII. Long-term regional cost allocation reforms
- IX. Interregional transmission coordination reforms
- X. Summary of state involvement in transmission planning and cost allocation reforms
- XI. Effective date, compliance and implementation

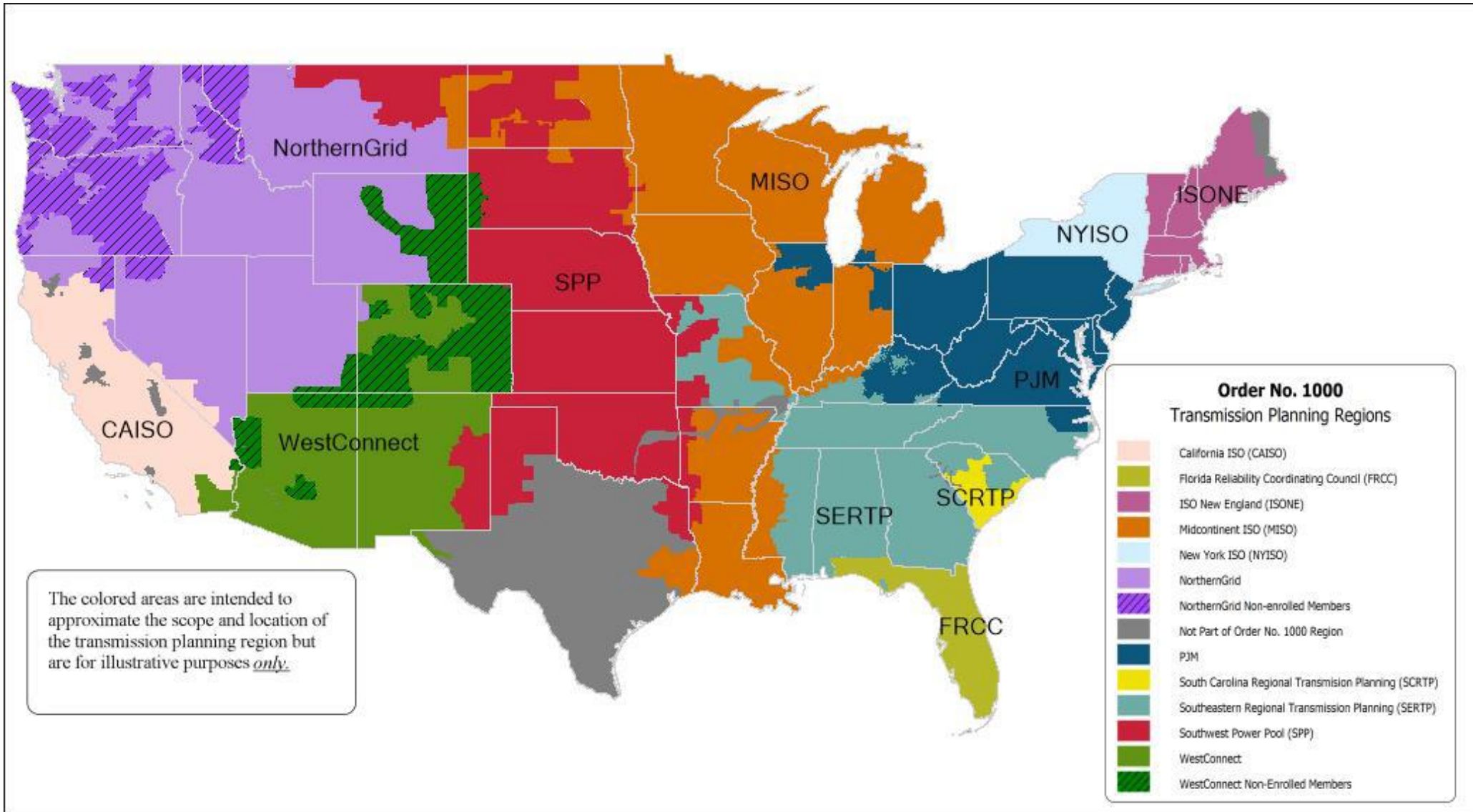


Transmission Planning and Cost Allocation Basics

All transmission planning and cost allocation processes:

- Identify transmission needs;
- Identify and evaluate transmission facilities to address those transmission needs;
- Address who pays for transmission, in a manner commensurate with benefits; and
- May determine who builds selected transmission facilities







Historical Framework of FERC's Transmission Planning Reforms

- Order No. 888 (1996): Implemented open access to transmission facilities owned, operated, or controlled by a public utility and included certain minimum requirements for transmission planning
- Order No. 890 (2007): Required transmission providers' local transmission planning processes to satisfy nine transmission planning principles: (1) coordination; (2) openness; (3) transparency; (4) information exchange; (5) comparability; (6) dispute resolution; (7) regional participation; (8) economic planning studies; and (9) cost allocation for new projects
- Order No. 1000 (2011): Required (applies to transmission providers): (1) regional transmission planning; (2) consideration of transmission needs driven by Public Policy Requirements; (3) nonincumbent transmission developer reforms; (4) regional and interregional cost allocation, including a set of principles for each category of cost allocation; and (5) interregional transmission coordination

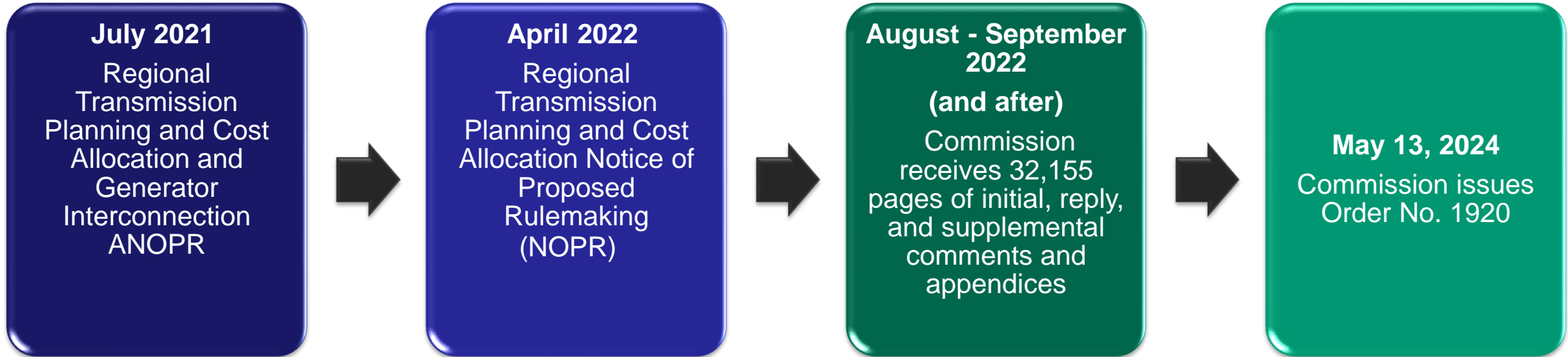


Deficiencies in Existing Transmission Planning and Cost Allocation Processes

- Failure to conduct a sufficiently long-term assessment of long-term transmission needs (PP 114, 115-117)
- Failure to adequately account for known determinants of long-term transmission needs (PP 114, 118-121)
- Failure to consider the broader set of benefits of regional transmission facilities planned to meet those long-term transmission needs (PP 114, 122-123)
 - This results in piecemeal transmission expansion addressing relatively near-term transmission needs, relatively inefficient or less cost-effective investment in transmission, and customers paying more than is necessary to meet their transmission needs or forgoing benefits (PP 85, 112)



Order No. 1920 Rulemaking Process



Joint Federal-State Task Force on Electric Transmission
Eight meetings held from November 2021 – February 2024
Topics Include: State perspectives on transmission planning, categories and types of transmission benefits, interregional transmission planning, regulatory gaps and oversight in transmission development, grid enhancing technologies, and transmission siting



Roadmap of Major Reforms Established by Order No. 1920

- **Long-Term Regional Transmission Planning** (at a minimum every 5 years, using a 20 year horizon, at least three long-term scenarios and sensitivities that incorporate specific categories of factors and best available data inputs)
- **Benefits** (measure and use seven specific benefits to determine whether any identified long-term regional transmission facilities more efficiently or cost-effectively address long-term transmission needs)
- **Evaluation Process and Selection Criteria** (identify and evaluate long-term regional transmission facilities for selection)
- **Consideration of Interconnection-related Transmission Needs and Alternative Transmission Technologies** (consider transmission facilities that address interconnection-related needs, and consider the use of alternative transmission technologies in transmission planning)
- **Enhanced Transparency** (for local transmission planning information, and hold at least three stakeholder meetings)
- **Right-Sizing Replacement Transmission Facilities** (identify potential opportunities to right-size replacement transmission facilities)
- **Long-Term Regional Cost Allocation** (one or more ex ante long-term regional transmission cost allocation methods, optional state agreement process)
- **Interregional Transmission Coordination** (reflect the applicable reforms in the final rule, and comply with additional information sharing and transparency requirements)



Summary of State Involvement in Transmission Planning and Cost Allocation Reforms

- Long-term scenarios
 - Meaningful opportunity to provide timely input on the development of long-term scenarios, including factors and data inputs, and states can explain how their own policies and planning affect long-term transmission needs (PP 528 – 537, 560-562, 634)
- Evaluation and selection
 - Transmission providers must consult with and seek the support of relevant state entities regarding the evaluation process and selection criteria that transmission providers will use when deciding whether to select long-term regional transmission facilities (PP 994-1002)
- Voluntary funding
 - Transmission providers must include a process to provide relevant state entities with the opportunity to voluntarily fund the cost of, or a portion of the cost of, a long-term regional transmission facility (PP 1012-1018)
- Cost Allocation
 - Transmission providers must hold an engagement period during which relevant state entities may participate in a forum for negotiating an *ex ante* cost allocation method or methods for selected long-term regional transmission facilities (P 1354)
 - Permits transmission providers to adopt, if agreed to by relevant state entities, a state agreement process for allocating the costs of all, or a subset of, long-term regional transmission facilities (PP 1291, 1402-1403, 1409)



Relevant State Entity Definition

- A 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 1355)
 - Order No. 1920 adds the word “electric” before “utility regulation” to the proposed definition in order to make clear that Relevant State Entities are those agencies responsible for electric (and not other types) of utility regulation (P 1355)

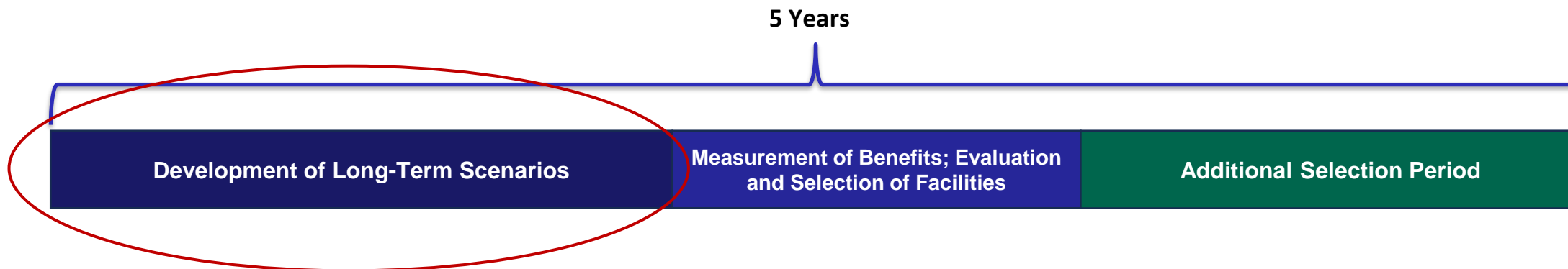


Regional Transmission Planning Reforms: Long-Term Regional Transmission Planning

- Transmission providers must conduct Long-Term Regional Transmission Planning (P 224), which requires them to:
 - Plan, at a minimum frequency of every 5 years, on a sufficiently long-term, forward-looking basis to identify long-term transmission needs over a planning horizon of at least 20 years (PP 225, 344, 377)
 - Identify, by year 3 in the planning cycle, transmission facilities that meet long-term transmission needs and measure the benefits of those transmission facilities (PP 225, 379)
 - Evaluate, by year 3 in the planning cycle, the identified transmission facilities for potential selection in the regional transmission plan as the more efficient or cost-effective solutions (PP 225, 379)



Long-Term Regional Transmission Planning Reforms: Long-Term Scenarios





Long-Term Regional Transmission Planning Reforms: Long-Term Scenarios

- Transmission Providers Must Develop and Use Long-Term Scenarios as Part of Long-Term Regional Transmission Planning and Must:
 - Incorporate into the long-term scenarios a set of Commission-identified categories of factors that give rise to long-term transmission needs (PP 409 - 421)
 - Provide a meaningful opportunity for stakeholder input, **including from state and local regulators**, as well as non-jurisdictional entities, into the factors used to develop long-term scenarios (PP 528 – 537)
 - Develop a plausible and diverse set of at least three long-term scenarios (PP 559 – 563)
 - Analyze uncertain operational outcomes due to high-impact, low-frequency events over a wide area due to extreme weather (PP 593 – 601)

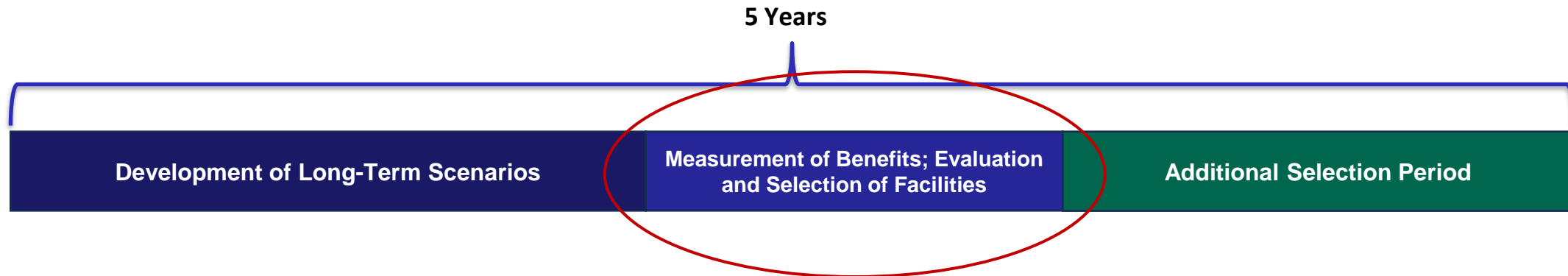


Long-Term Regional Transmission Planning Reforms: Seven Categories of Factors (that give rise to long-term transmission needs, and are used in long-term scenarios)

1. Federal, Tribal, **state**, and local laws affecting the resource mix and demand (PP 432 – 437)
2. Federal, Tribal, **state**, and local laws on decarbonization and electrification (PP 440 – 442)
3. **State-approved** integrated resource plans and entities' expected supply obligations (PP 447-449)
4. Trends in fuel costs and in the cost, performance, and availability of generation, electric storage resources, and building and transportation electrification technologies (PP 456 – 458)
5. Resource retirements (PP 463 – 466)
6. Generator interconnection requests and withdrawals (PP 472 – 473)
7. Utility and corporate commitments, and federal, Tribal, **state**, and local policy goals (PP 481 - 484)



Measurement of Benefits; Evaluation and Selection of Facilities





Using Benefits in Long-Term Regional Transmission Planning

- Requires the use of seven enumerated benefits to evaluate long-term regional transmission facilities (P 719)
- Explains how the seven enumerated benefits could be calculated, but does not require a specific method for calculating (PP 728, 837-839)
- Requires transmission providers to calculate the benefits of long-term regional transmission facilities over a time horizon that covers, at a minimum, 20 years starting from the estimated in-service date of the transmission facilities (P 859)
- Requires that this minimum 20-year benefit horizon be used both for the evaluation and the selection of long-term regional transmission facilities in the regional transmission plan for purposes of cost allocation (PP 859-860)
- Requires transparency such that stakeholders understand which benefits transmission providers considered in the evaluation process, including any beyond the required seven benefits (P 737)



Long-Term Regional Transmission Planning Reforms: Seven Required Benefits

1. Avoided or deferred reliability transmission facilities and aging infrastructure replacement (PP 745-747)
2. Either reduced loss of load probability or reduced planning reserve margin (PP 755-760)
3. Production cost savings (PP 767-774)
4. Reduced transmission energy losses (PP 781-783)
5. Reduced congestion due to transmission outages (PP 788-790)
6. Mitigation of extreme weather events and unexpected system conditions (PP 800-811)
7. Capacity cost benefits from reduced peak energy losses (PP 817-819)



Evaluation and Selection of Long-Term Regional Transmission Facilities

- Requires an evaluation process and selection criteria to identify and evaluate long-term regional transmission facilities to address identified long-term transmission needs (PP 911-918)
 - However, **no selection mandate**: transmission providers do not have to select identified transmission facilities (PP 1026-1028)
 - Transmission providers must consult with and seek the support of **relevant state entities** regarding the evaluation process and selection criteria (PP 994-1002)
- Allows **relevant state entities** and interconnection customers to voluntarily fund the cost of, or a portion of the cost of, a long-term regional transmission facility that otherwise would not meet selection criteria (PP 1012-1018)
- Provides for reevaluation—in certain circumstances—of previously selected long-term regional transmission facilities (PP 1048-1061)



Selection of Long-Term Regional Transmission Facilities -- General Requirements

- Transmission providers must establish selection criteria that:
 - are transparent and not unduly discriminatory or preferential (P 954);
 - aim to ensure that more efficient or cost-effective long-term regional transmission facilities are selected (P 955);
 - seek to maximize benefits accounting for costs over time without over-building transmission facilities (P 964)
- Transmission providers must “consult with and seek support from relevant state entities,” as proposed in P 244 in the NOPR and P 994 in Order No. 1920



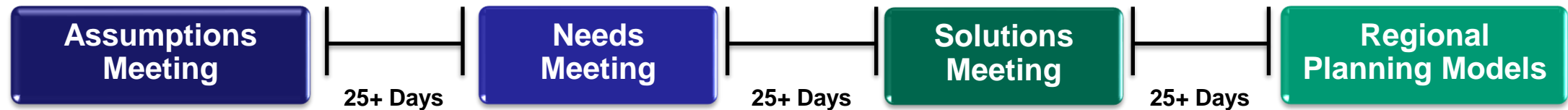
Additional Reforms to Improve Efficiencies and Accommodate Alternative Transmission Technologies

- Transmission providers must evaluate transmission facilities that address interconnection-related transmission needs identified multiple times in the generator interconnection process (PP 1106–1121)
 - Minimum voltage and cost threshold criteria (PP 1145-1162)
 - *Only* applies to existing Order No. 1000 regional transmission planning (PP 1126-1129)
- Transmission providers must consider the use of dynamic line ratings and advanced power flow control devices, advanced conductors, and transmission switching (PP 1198-1216, 1239-1247)
 - In *both* existing Order No. 1000 regional transmission planning and long-term regional transmission planning (PP 1198-1216)



Enhanced Transparency of Local Transmission Planning Inputs

- Transmission providers must hold three stakeholder meetings, each at least 25 calendar days apart, to review local transmission planning inputs before the local transmission plan can be incorporated into the regional planning models (PP 1625-1648)
 - Meeting materials posted no fewer than five calendar days prior to each meeting
 - Transmission providers must respond to questions or comments from stakeholders such that it allows stakeholders to meaningfully participate





Identifying Potential Opportunities to Right-Size Replacement Transmission Facilities

- “Right-sizing” modifies a transmission provider’s in-kind replacement of an existing transmission facility to increase that facility’s capacity. Right-sizing can be more efficient or cost-effective than piecemeal in-kind replacements (P 1682)
- Individual transmission providers are required to submit a list of expected in-kind replacement facilities over the next 10 years to help identify potential opportunities to right-size the facilities to meet long-term transmission needs (P 1685)
- If a transmission provider in a region selects a right-sized facility to address a long-term transmission need, then the incumbent transmission provider has a federal right of first refusal to develop that facility (P 1702)



Long-Term Regional Cost Allocation

- Requires transmission providers to file one or more *ex ante* long-term regional transmission cost allocation methods to allocate the costs of long-term regional transmission facilities (or a portfolio of such facilities) (P 1291)
 - Responsive to the NOPR question on the appropriate outcome if Relevant State Entities fail to agree on a cost allocation method (NOPR P 310)
- Permits transmission providers to adopt a State Agreement Process, wherein relevant state entities agree to a process to determine a cost allocation method or methods for long-term regional transmission facilities (PP 1291, 1402-1403, 1409)
- Requires a six-month engagement period during which transmission providers facilitate communications between themselves and relevant state entities regarding cost allocation methods for long-term regional transmission facilities and/or a State Agreement Process that enables robust participation by relevant state entities (P 1354, 1362)



Long-Term Regional Cost Allocation

5 Years



Ex Ante Cost Allocation Method (Known)

State Agreement Process (if applicable). Concludes no later than 6 mos. after selection

If no state agreement on cost allocation, *ex ante* Cost Allocation Method used



Long-Term Regional Cost Allocation Principles

- Cost allocation methods must allocate costs in a manner that is at least roughly commensurate with estimated benefits (P 1477-1478, 1506, 1510)
- Consistent with existing precedent, does not allow allocation of costs to entities that do not receive benefits or receive only trivial benefits in relationship to the costs of those transmission facilities (P 1515 & n. 3222)



Interregional Transmission Coordination Reforms

- Transmission providers must:
 - Revise their interregional transmission coordination processes to reflect the Long-Term Regional Transmission Planning reforms adopted in the final rule (PP 1751-1758)
 - Provide for the sharing of information regarding long-term transmission needs, as well as long-term regional transmission facilities (PP 1751, 1753-1754)
 - Provide for the identification and joint evaluation of interregional transmission facilities that may more efficiently or cost-effectively address long-term transmission needs (PP 1751, 1753-1756)
 - Allow an entity to propose an interregional transmission facility as a potential solution to long-term transmission needs (P 1752)



Effective Date, Compliance, and Implementation

- Order No. 1920:
 - Becomes effective 60 days from publication in the *Federal Register* (P 1792)
 - Requires a compliance filing within 10 months of the effective date for everything except requirements related to interregional transmission coordination (PP 1768-1769)
 - Requires a compliance filing within 12 months of the effective date for the interregional transmission coordination requirements (P 1770)
- Implementation: Transmission providers must commence the first Long-Term Regional Transmission Planning cycle no later than one year following due date of compliance filing (PP 1071-1074)



THANK YOU!

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Additional Resources

- Fact Sheet: <https://www.ferc.gov/news-events/news/fact-sheet-building-future-through-electric-regional-transmission-planning-and>
- Order No. 1920: <https://www.ferc.gov/media/e1-rm21-17-000>