INTERWEST ENERGY ALLIANCE

LONG-TERM REGIONAL TRANSMISSION PLANNING.

(FERC ORDER 1920)

OCT 28, 2024
BEN FITCH-FLEISCHMANN, PHD
DIRECTOR, MARKETS & TRANSMISSION
INTERWEST ENERGY ALLIANCE
BEN@INTERWEST.ORG

LONG-TERM REGIONAL TRANSMISSION PLANNING (ORDER 1920)

Western Transmission Expansion Coalition (WestTEC)

- Overview of Order 1920 Long-term Regional Transmission Planning
 - Where it fits in Local Planning vs Regional Planning
 - Cost Allocation
 - Relevance of an RTO
 - DA market vs RTO











































































































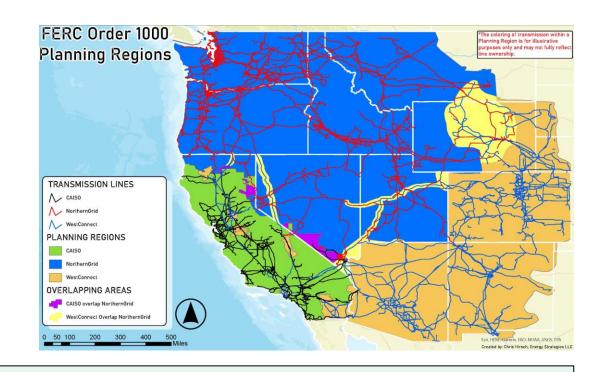






WESTTEC: A VOLUNTARY COALITION OF THE WILLING

- Local Transmission Planning (Single utility/TO)
 - **O**890 (2007):
- Regional Transmission Planning (Multi-utility)
 - O1000 (2011): Multi-utility planning
 - O1920 (2024): Long-term multi-utility planning
- Interregional Transmission Planning
 - "Coordination meetings"



Western Transmission Expansion Coalition (WestTEC)

- Voluntary, not driven by FERC
- West-wide, long-term evaluation of Tx needs and solutions
- Principles: Different, Inclusive, Expedient, Transparent

- Broad participation:
 - Tx owners, Independent/merchant Tx developers, Trade associations, other experts (national labs, modeling/planning orgs)

WESTTEC'S INTENDED RESULTS

WestTEC is a study only. It has no authority over cost allocation.

The goal of WestTEC is to produce "actionable" results:

- Provide inputs for local and regional Tx planning.
- Provide data and results to assist in evaluating total benefits.
- Initiate bilateral negotiations and development activity for specific projects.
- Spur pro-active engagement with local communities, regulators, state agencies.
- **Be a resource for regulators** in prudency evaluations

WESTTEC PROJECT TIMELINE

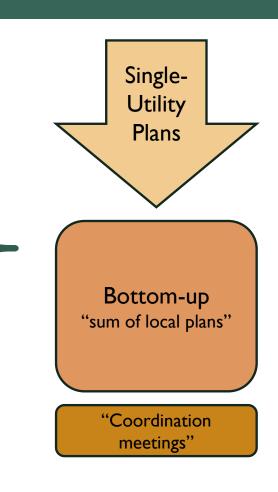


PROJECT DISTRIBUTION &



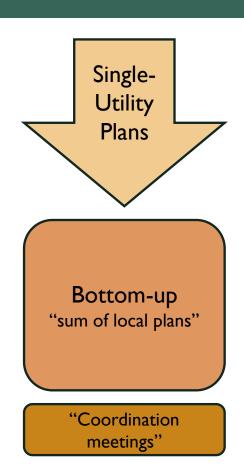
CURRENTLY IN THE WEST

- Local Transmission Planning
 - Single utility. 10- or sometimes 15-year planning horizon
 - Largely focused on expansion for "reliability" (NERC violations)
 - Exceptions: Colorado Power Pathway, Greenlink
 - Allows requests for "economic" studies (from utility or qualified developers)
- Regional Transmission Planning
 - CAISO, NorthernGrid, and WestConnect
 - Considers needs driven by public policy, reliability needs, economic needs (O1000)
 - Projects selected in regional plans go through cost allocation (per tariff)
 - Allows requests for "economic" studies (from utilities or qualified developers)
- Inter-regional
 - Coordination between CAISO, NG, and WC
- Merchant projects
 - SunZia, Transwest Express, SWIP-North (partnership with NVE, CAISO)



CURRENTLY IN THE WEST

- Local Transmission Planning
 - Single utility. 10- or sometimes 15-year planning horizon
 - Largely focused on expansion for "reliability" (NERC violations)
 - **Exceptions:** Colorado Power Pathway, Greenlink
 - Allows requests for "economic" studies (from utility or qualified developers)
- Regional Transmission Planning
 - CAISO, NorthernGrid, and WestConnect
 - Considers needs driven by public policy, reliability needs, economic needs (O1000)
 - Projects selected in regional plans go through cost allocation (per tariff)
 - Allows requests for "economic" studies (from utilities or qualified developers)
- Inter-regional
 - Coordination between CAISO, NG, and WC
- Merchant projects
 - SunZia, Transwest Express, SWIP-North (partnership with NVE, CAISO)

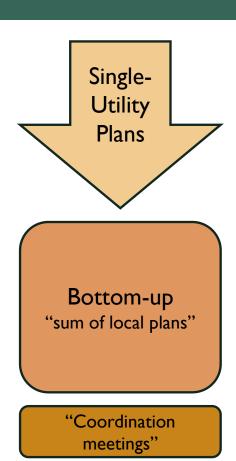


CURRENTLY IN THE WEST

- Local Transmission Planning
 - Single utility. 10- or sometimes 15-year planning horizon
 - Largely focused on expansion for "reliability" (NERC violations)
 - **Exceptions:** Colorado Power Pathway, Greenlink
 - Allows requests for "economic" studies (from utility or qualified developers)

Regional Transmission Planning

- CAISO, NorthernGrid, and WestConnect
- Considers needs driven by public policy, reliability needs, economic needs (O1000)
- Projects selected in regional plans go through cost allocation (per tariff)
- Allows requests for "economic" studies (from utilities or qualified developers)
- Inter-regional
 - Coordination between CAISO, NG, and WC
- Merchant projects
 - SunZia, Transwest Express, SWIP-North (partnership with NVE, CAISO)



FERC

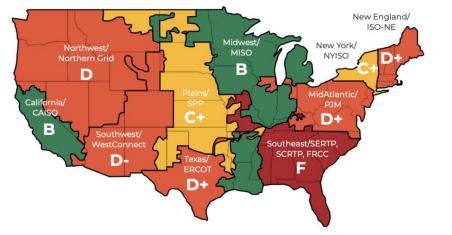
- Local Planning Single Utility
 - Regional Planning
- Long-term Regional Planning
 - 3 "plausible and diverse" scenarios
 - Consider 7 specific factors driving need for new Tx, and 7 specific benefits
 - Establish default cost allocation method and allows "state agreement process"

Order 1920

- Joint utility projects
- Merchant projects

Forecast Horizon	Study Frequency
10-15 years	2 years
10-15 years	2 years
20+ years	5 years

Regional Planning Report Card



Source: ACEG "Transmission Planning and Development Regional Report Card" June 2023

TAKING A WIDE LENS ON TRANSMISSION "NEEDS" AND "BENEFITS" IN 01920

7 Factors

- 1. Federal, state, local, and federally recognized Tribal laws affecting resource mix and demand
- 2. Federal, state, local, and federally recognized Tribal laws on decarbonization and electrification
- 3. State-approved utility **integrated resource plans** and entities' expected supply obligations
- 4. Trends in fuel costs and generator cost and performance (availability of generation, electric storage resources, and building and transportation electrification technologies)
- 5. Generator **retirements**
- 6. Generator **interconnection** requests and withdrawals
- 7. **Utility and corporate commitments**, and federal, state, local, and federally recognized Tribal policy goals

7 Benefits

- 1. Avoided or deferred reliability transmission facilities and aging infrastructure replacement
- 2. 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
- Mitigation of extreme weather events and unexpected system conditions
- Capacity cost benefits from reduced peak energy losses





DAY-AHEAD MARKET vs RTO

- Day-Ahead Market
 - Day-ahead bidding/scheduling and generation dispatch optimization
 - Includes real-time or "imbalance" market (like the Western EIM)

Economic dispatch optimization over the bulk of generation

- ISO/RTO
 - Consolidated transmission tariff (OATT)
 - Consolidated balancing authority
 - Operates transmission network owned by others
 - Conducts transmission planning
 - Includes cost allocation of transmission projects

DA market plus:

Consolidation of Administration, Operations, and Transmission planning

COST ALLOCATION

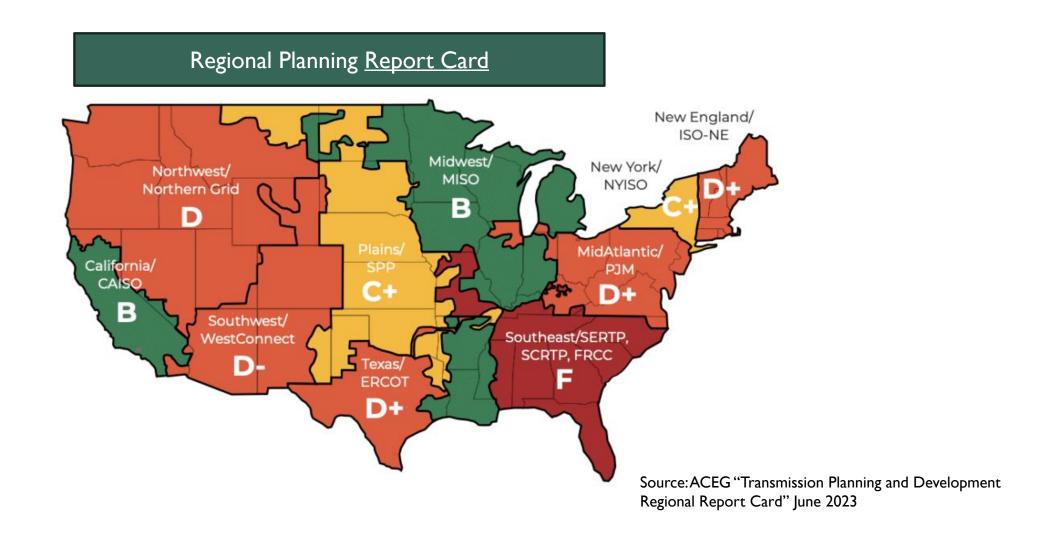
- Order 1920 requires:
 - Ex Ante cost allocation method
 - Applies to long-term regional Tx facilities selected by the O1920 process
 - Sets default method for distributing costs among those who benefit
 - Must distribute costs in a manner at least roughly commensurate with benefits
 - State Agreement Process
 - 6 month "state engagement" process required before TOs file tariff updates
 - If states agree to a "State Agreement Process" the TOs may file the process with FERC
 - Could lead to an alternative cost allocation method (agreed to by the relevant state entities)
- Order 1920 in an RTO...

COST ALLOCATION

- Order 1920 requires:
 - Ex Ante cost allocation method
 - Applies to long-term regional Tx facilities selected by the O1920 process
 - Sets default method for distributing costs among those who benefit
 - Must distribute costs in a manner at least roughly commensurate with benefits
 - State Agreement Process
 - 6 month "state engagement" process required before TOs file tariff updates
 - If states agree to a "State Agreement Process" the TOs may file the process with FERC
 - Could lead to an alternative cost allocation method (agreed to by the relevant state entities)
- Order 1920 in an RTO...



TRANSMISSION PLANNING IN AN RTO



Western **Progress** Regional **Transmission Day-Ahead Organization Markets** Single Balancing Area **Energy** Centralized Transmission **Imbalance** Day-ahead trading **Bilateral Markets** Planning and Cost and scheduling Allocation (Paying) **Transactions** CAISO's "EDAM" Singe OATT (single SPP's "Markets+" Intra-hour planning administrator of CAISO EIM and interconnection queue) **SPP WEIS**

Benefits increase with every step. Centralized transmission planning and other transmission benefits only accomplished through full RTO.

QUESTIONS?

Ben Fitch-Fleischmann, PhD Director, Markets & Transmission

ben@interwest.org

400 Gold Ave. SW Suite 700 Albuquerque, NM 87102



INTERWEST ENERGY ALLIANCE

RESOURCES FOR MORE INFORMATION

Energy Strategies, for CREPC: Cost Allocation Frameworks for the West – Part 1 (also: Part 2, Part 3)

Brattle: Transmission Cost Allocation: Principles, Methodologies, and Recommendations (link)

Order 1920 FERC Explainer

Order 1920 FERC Fact Sheet

Presentation on O1920 to Organization of MISO State's Cost Allocation Principles Committee (link, start pg. 11)