

# WESTERN MARKET EXPANSION ACTIVITIES

Robin Arnold

Markets & Transmission Director

Renewable Northwest

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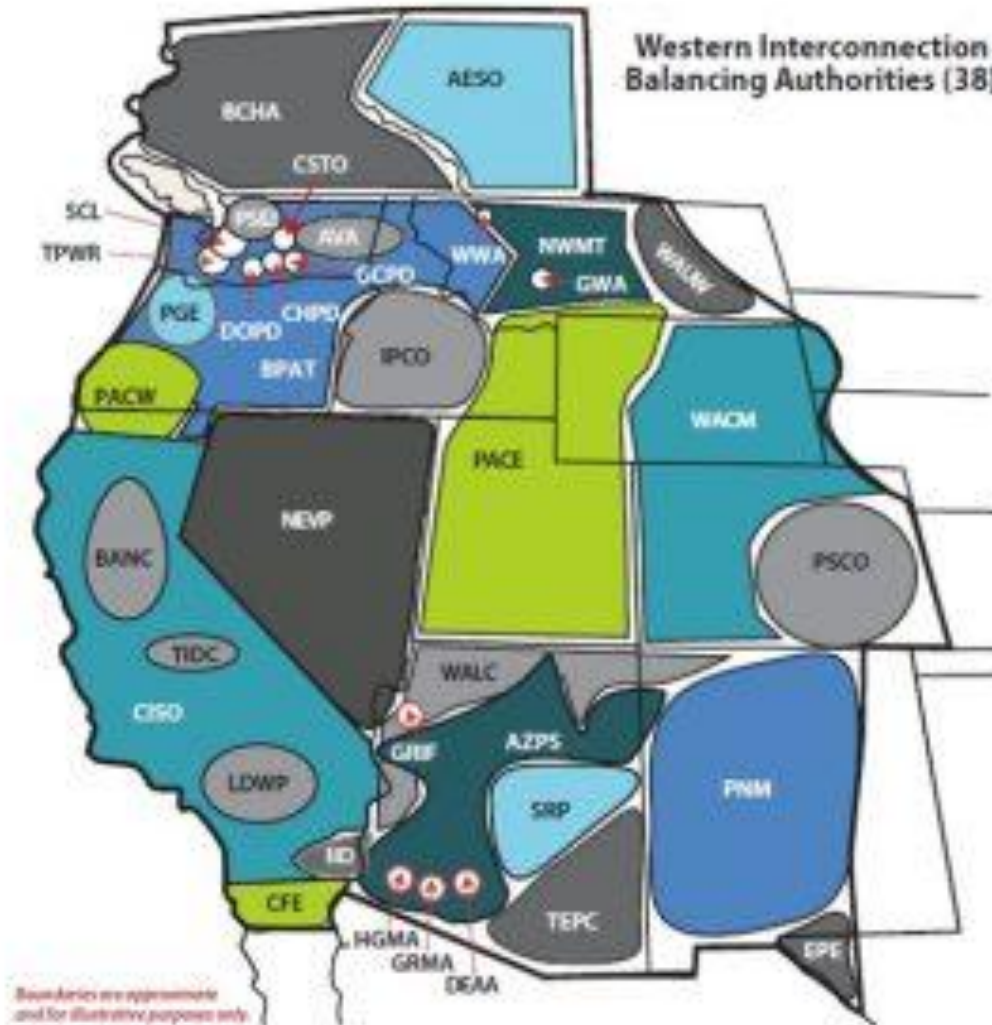


# MISSION

Our mission is to decarbonize the region by accelerating the transition to renewable electricity.



# Current Balancing Authorities in West



## RTO Services

- RTOs responsible for transmission grid reliability, planning, and operation
- Schedule generation resources that are least-cost a day in advance, and dispatch over five-minute intervals
- RTO has functional control of transmission system and engages in coordinated regional planning for transmission within footprint
- Governing board is independent of market participants, and the market is independently monitored
- Typically high entry/exit fees

## EIM/EIS/RA Programs

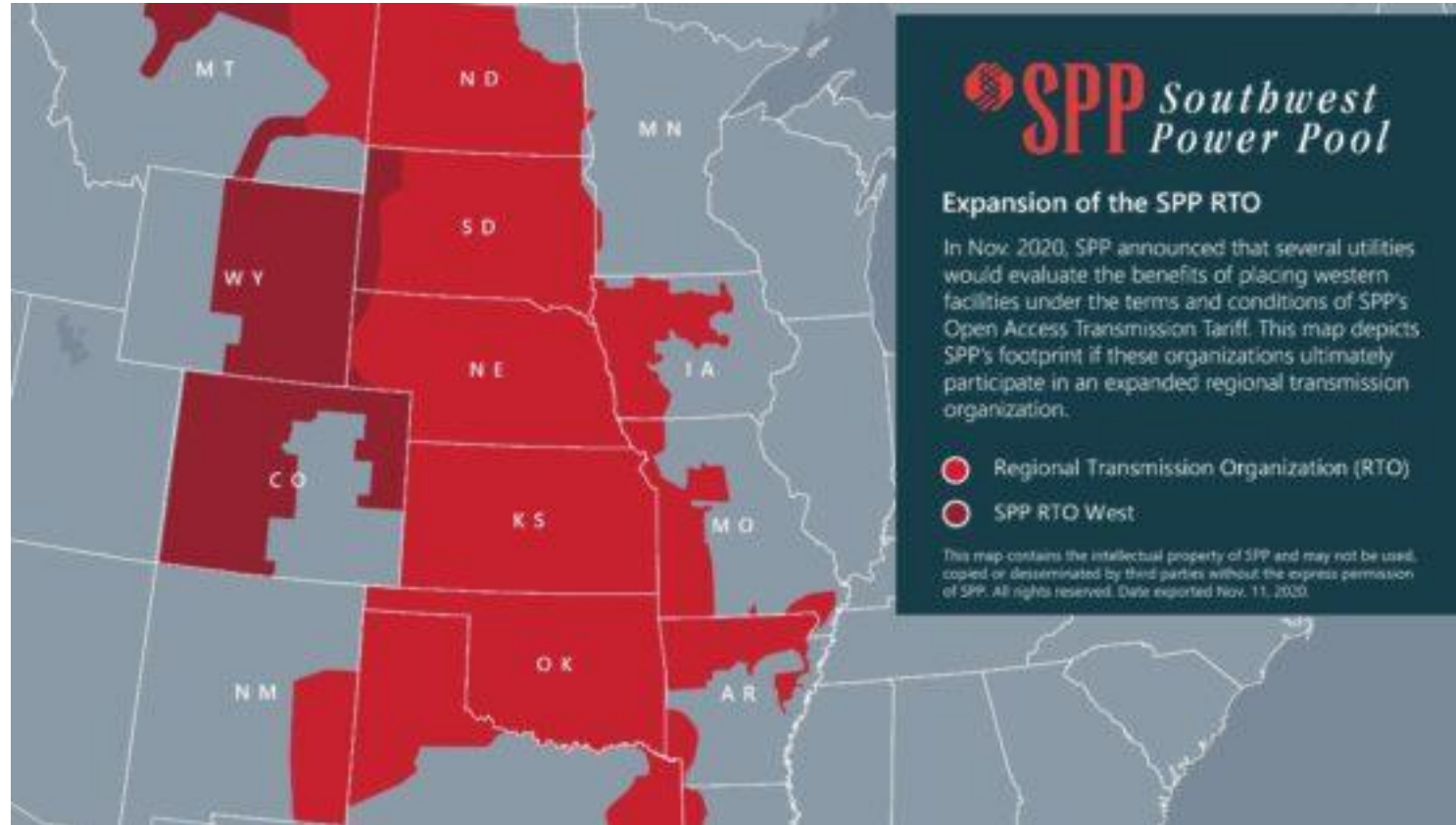
- EIM/EIS only trade excess generation available in real time for five-minute intervals
- Resource Adequacy Program participants commit to maintaining a specified amount of capacity resources to ensure the region can meet peak capacity needs (no energy market component)

### Both EIM/EIS and RA:

- Transmission owners retain individual operational control of systems, including authority over balancing authorities
  - Transmission needs to be arranged separately for each BA to move power from distant points, leads to “rate pancaking”
- Easier to enter & exit, less binding than RTO

# Regional RTO Activity

# SPP RTO-WEST



# SPP RTO-WEST

- SPP is currently in the process of developing an expansion of its RTO into the Western interconnection.
  - The following entities have been part of the ongoing negotiations: WAPA (Upper Great Plains-west, Colorado River Storage Project, and Rocky Mountain regions); Colorado Springs Utilities; Basin Electric Power Cooperative; Deseret Power Electric Cooperative; Municipal Energy Agency of Nebraska; Tri-State Generation and Transmission; Wyoming Municipal Power Agency
  - States involved in the SPP RTO-West expansion are Montana, Wyoming, and Colorado
- RTO-West would operate under similar terms and conditions as the current SPP footprint but would be its own balancing authority area in the West.
- SPP’s Board has already approved the terms & conditions; next steps involve stakeholder processes for prospective members, which runs through April 2022. At that time, commitment letters would need to be signed.
- SPP plans to file with FERC in October 2022 and plans a “go-live” date of March 1, 2024.

# SPP RTO-WEST

- Governance
  - Stakeholder participation in SPP is largely limited to participating members. State regulators (such as the PSC) can participate in the Regional States Committee, but entities such as the Consumer Counsel can not.
    - Entities such as the Montana Consumer Counsel, Independent Power Producers, Public Interest Organizations, or Trade Associations wishing to join must pay an annual \$6,000 fee plus a \$50,000 “withdrawal deposit” to cover any costs that SPP may incur if the entity withdraws its membership.
      - SPP’s Board is currently reviewing membership requirements, including fee waivers for non-participants
    - The Regional State Committee would need to vote to expand its membership to include Western states once RTO-West goes live. To-date, Western states are not participating members in the RSC.



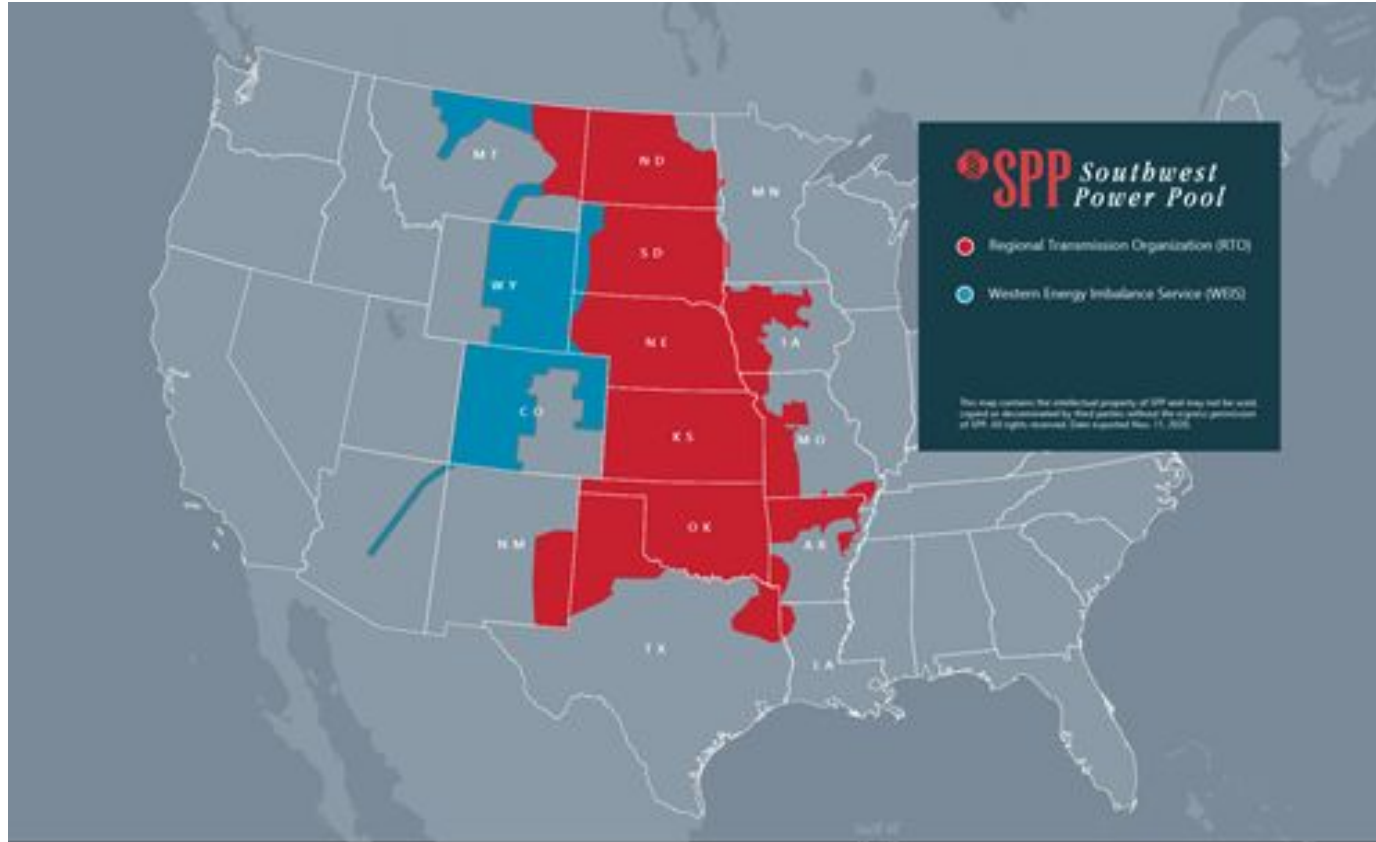
# Regional Market Expansion Activities

The following activities are steps toward full market expansion, however, fall short of being an RTO.



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# SPP WESTERN ENERGY IMBALANCE SERVICE



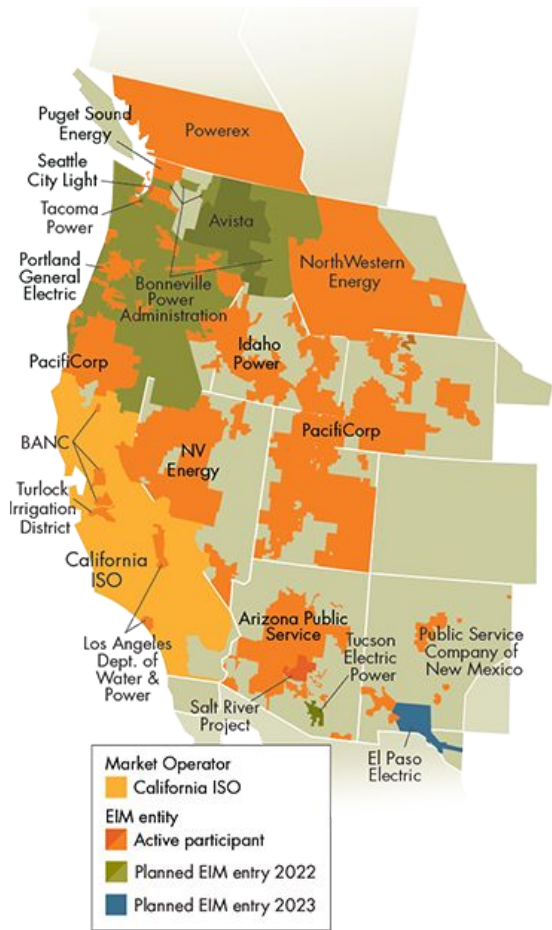
# SPP WESTERN ENERGY IMBALANCE SERVICE

- The Western Energy Imbalance Service (“WEIS”) became operational in February 2021, includes the same members seeking to join SPP’s RTO-West
- SPP’s WEIS was designed to optimize market efficiencies by centrally dispatching participating generation in five-minute intervals. Utilities do not have to be SPP RTO members to participate.
- The future of WEIS is unknown. If all members join RTO-West, there will be no need to operate WEIS separately. Additionally, SPP is working on developing an extended day-ahead market, Markets+, which will replace WEIS if it becomes operational.

## Governance

- SPP’s Board of Directors oversees the administration of WEIS.
- WEIS has a Western Markets Working Group whose membership is only open to WEIS participants (however, meetings are open to the public).

# WESTERN ENERGY IMBALANCE MARKET (CAISO)



# WESTERN ENERGY IMBALANCE MARKET (CAISO)

- PacifiCorp and CAISO launched the West's first Energy Imbalance Market in 2014.
- Similar to SPP's WIES, the EIM allows for sales of excess energy generation in five-minute intervals.
  - Efficiencies of dispatch allow for greater integration of renewables and can help manage transmission congestion.

## Governance

- Joint Authority recently approved, allowing EIM-related decisions to go to the CAISO Board of Governors and EIM Governing Body simultaneously
- The EIM Governing Body members are selected by a Nominating Committee, which has representatives from a variety of sectors.
- EIM also has a Regional Issue Forum, with sector representatives from transmission-owning utilities, independent power producers and power marketers, public interest and consumer advocates, publicly owned utilities, and neighboring balancing authorities.
- Sector representatives do not pay fees to participate

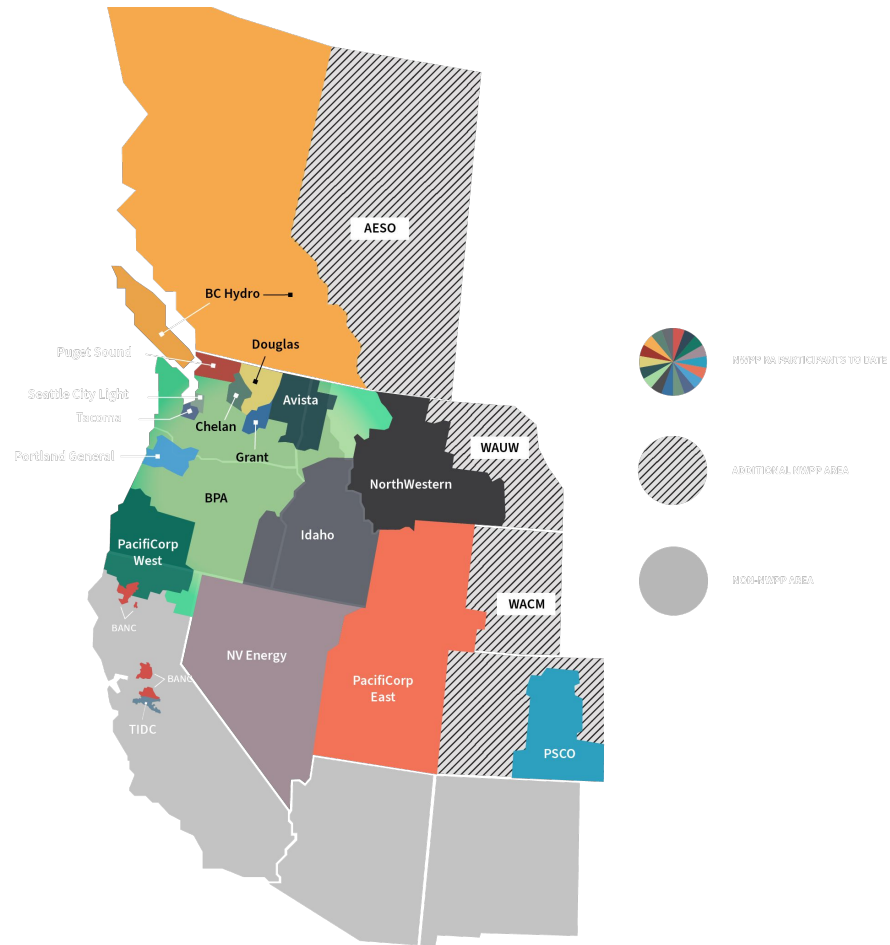
# CAISO EXTENDED DAY-AHEAD MARKET

- An extended day-ahead market (“EDAM”) allows day-ahead unit commitment and trading (rather than the last-minute trading available in the EIM/EIS).
- CAISO’s EIM issued a straw EDAM proposal in February 2020, however, EDAM discussions stalled while CAISO focused on its “Summer Readiness Initiative” to address the August 2020 blackouts. Discussions resumed in January 2022, and a detailed draft straw proposal was issued on April 28, 2022. CAISO hopes to make a FERC filing for EDAM approval in 2023, with a go-live date in 2024.
  - Transmission elements are key component of EDAM design—the EIM does not charge for transmission usage, however, EDAM will be reliant on available transmission capacity and each transmission owner will need to be appropriately compensated.
- Governance: CAISO is exploring how to extend the joint authority model for the CAISO Board of Governors and EIM Governing Body to include EDAM issues. The RIF and Nominating Committee would also be expanded to include EDAM.

# SPP Markets+

- SPP is developing a Markets+ program that would function as an extended day-ahead market and replace the WEIS. SPP has created working groups to develop a detailed design proposal by September 2022. Many of the same stakeholders participating in the EDAM process are also working to develop Markets+. Drafting of tariff language and protocols would begin in Q1 of 2023.
- Governance: SPP is proposing that Markets+ should be governed by a Markets+ Independent Panel (MIP), overseen by the SPP Board and with an SPP Board member as the Panel's Chair. Immediately below the MIP would be a Markets+ Participants Executive Committee (MPEC), made up of full-paying Markets+ Participants. Stakeholders who are not participants may pay a \$5,000 annual fee to have sector representation on the nominating committee (for selecting MIP members other than the Chair) and the opportunity to potentially be appointed to working committees by the MPEC.

# WESTERN POWER POOL RESOURCE ADEQUACY PROGRAM





# WESTERN POWER POOL RESOURCE ADEQUACY PROGRAM

- In 2019, the Western Power Pool and its members began to develop a Western Resource Adequacy Program (WRAP)
  - The WPP operates several other programs designed to improve coordination in the Pacific Northwest region, including reserve sharing, and operates the Northern Grid Transmission planning group.
- WRAP is a voluntary program to share capacity resources in the region. The program is intended to aid participating members in meeting customers electricity demand during extreme events, and is not a market.
- WPP hired SPP to design and operate the WRAP.
- WPP is planning to file with FERC for approval of WRAP in August 2022.

# WESTERN POWER POOL WESTERN RESOURCE ADEQUACY PROGRAM

## Governance

- While details of the program are still under development, the governance structure currently includes a Nominating Committee and a Program Review Committee that will include representation from participating members and broader sector stakeholders. No fees have been proposed for the sector representatives.

## Next Steps

- The WRAP is currently in the non-binding forward-showing phase and has 20 participants in 9 western states and Canada. In this phase, utilities are responsible for their own costs to participate. The binding, operational phase is expected to begin in 2024 after receiving FERC approval. The binding phase will include penalties for non-compliance.

# State Activities Related to Regional Market Expansion



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# STATE COMMISSION- INITIATED DOCKETS

## ARIZONA AND NEW MEXICO

### ARIZONA

- On July 23, 2021, the AZ Corporation Commission opened docket [E-00000A-21-0271](#) to investigate regional planning in the West, questions of mandatory or voluntary participation in various Western regional market activities, consideration of the cost/benefits and reliability impacts of participation, and consideration of cost allocation, resource adequacy, and governance issues.
  - No schedule has been set yet for the docket.

### NEW MEXICO

- In December 2021, the NM Public Regulation Commission rejected a merger between AVANGRID and PNM Resources in docket [20-00222-UT](#). The rejected stipulation would have required PNM to convene an RTO initiative group to explore RTO development, including a task force to ensure that PNM met its zero carbon goals by 2040.
- PNM and AVANGRID extended the merger agreement through April 2023 while they appeal the NM PRC decision at the NM Supreme Court.

# STATE LEGISLATIVE RTO REQUIREMENTS

## COLORADO AND NEVADA

### COLORADO

- SB 72 (2021) requires utilities to join an organized wholesale market by January 1, 2030, absent a waiver from the PUC
- Creates the CO Electric Transmission Authority and creates new rules for CO PUC certification of Public Convenience & Necessity for new transmission lines.

### NEVADA

- SB 448 (2021) also requires utilities to join an organized wholesale market by January 1, 2030, absent the granting of waivers.
- Creates a Regional Transmission Coordination Task Force, composed of 23 members from a variety of sectors, to study opportunities to promote regional transmission development, with their first report to the legislature due by November 30, 2022.
- Requires NV Energy to file a transmission infrastructure plan with the Nevada PUC.

# STATE LEGISLATIVE CLEAN ENERGY STANDARDS

## OREGON

### OREGON

- [SB 589](#) (2021) requires the Oregon Department of Energy to identify the benefits, costs, and barriers to Oregon entities participating in an RTO
  - Requires a stakeholder advisory committee to meet at least twice before a report is due on December 31, 2021.
  - The [final study](#) was released in December 2021.
- [HB 2021](#) (2021) requires retail electricity providers to reduce electricity greenhouse gas emissions to 80% below baseline emission levels by 2030 and 100% by 2040.
  - The bill acknowledges that [regional markets play a critical role in achieving 100% zero carbon emissions](#), and states that OR should collaborate with other states to ensure that market rules do not undermine state policy objectives.

# STATE LEGISLATIVE CLEAN ENERGY STANDARDS

## WASHINGTON

### WASHINGTON

- [SB 5116](#) (2019-2020), the “Clean Energy Transformation Act” (“CETA”) requires utilities to be 100% greenhouse neutral by 2030 (allowing for natural gas offsets) and 100% renewable or non-emitting by 2045.
  - SB 5116 requires the WA Dept. of Commerce and the WA Utilities and Transportation Commission (“WUTC”) to establish a methodology to account for emissions associated with electricity purchases from regional markets.
    - WUTC established a Carbon and Electricity Markets working group to examine CETA’s integration with electricity markets outside the state and its compatibility with cap-and-trade programs (such as in California).

# Federal Activities Related to Regional Market Expansion



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# FERC



- FERC opened docket [RM21-17-000](#), an advanced notice of proposed rulemaking on transmission planning and cost allocation and generation interconnection processes.
- FERC and NARUC established a [Joint Federal-State Task Force on Electric Transmission](#).

# DEPARTMENT OF ENERGY



- The DOE has funded a study led by the Utah Office of Energy Development, the “State-led Markets Options Study,” which looks at the costs and benefits of different market expansion options in the West.
- Two reports came out of the study on Sept. 20, 2021, a [Technical Report](#) and a [Market and Regulatory Review Report](#).

# CONGRESS



- [HR 3684](#), “[INVEST in America Act](#),” includes a \$10 billion increase in spending authority for BPA; federal backstop provisions for transmission siting, and authority for the federal government to be an “anchor tenant” for up to 50% capacity on new transmission lines or line upgrades. The bill includes up to \$65 billion total to upgrade the electric transmission grid.
  - The bill became law on November 15, 2021.
  - DOE launched its “[Building a Better Grid](#)” initiative in January 2022 to identify national transmission needs.

# ADDITIONAL RESOURCES

- WIEB’s “Western Flexibility Assessment,”  
<https://westernenergyboard.org/wp-content/uploads/2019/12/12-10-19-ES-WIEB-Western-Flexibility-Assessment-Final-Report.pdf>
- FERC RTOs and ISOs: <https://www.ferc.gov/electric/power-sales-and-markets/rtos-and-isos>
- Western Resource Advocate’s “Overview of Regional Market Development in the Western Interconnection,”  
[https://westernresourceadvocates.org/wp-content/uploads/dlm\\_uploads/2019/04/Final-Western-Markets-Backgrounder-2-4-191.pdf](https://westernresourceadvocates.org/wp-content/uploads/dlm_uploads/2019/04/Final-Western-Markets-Backgrounder-2-4-191.pdf)
- SPP’s “Western Energy Imbalance Service and SPP Western RTO Participant Benefits,”  
[https://www.brattle.com/wp-content/uploads/2021/05/20622\\_western\\_energy\\_imbalance\\_service\\_and\\_spp\\_western\\_rto\\_participation\\_benefits.pdf](https://www.brattle.com/wp-content/uploads/2021/05/20622_western_energy_imbalance_service_and_spp_western_rto_participation_benefits.pdf)
- NESCOE’s “Governance Structure and Practices in the FERC Jurisdictional RTOs/ISOs,”  
<https://nescoe.com/resource-center/isorto-governance-feb2021/>