Wholesale Electricity Markets in the West: Trends & Opportunities for Regional Coordination

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Western Resource Advocates

AGENDA

Wholesale Markets

- Intro to WRA
- Wholesale Electricity Markets in the West
- Upcoming Opportunities

About Western Resource Advocates

Our mission is to protect the West's land, air, and water to ensure that vibrant communities exist in balance with nature.

Western Lands

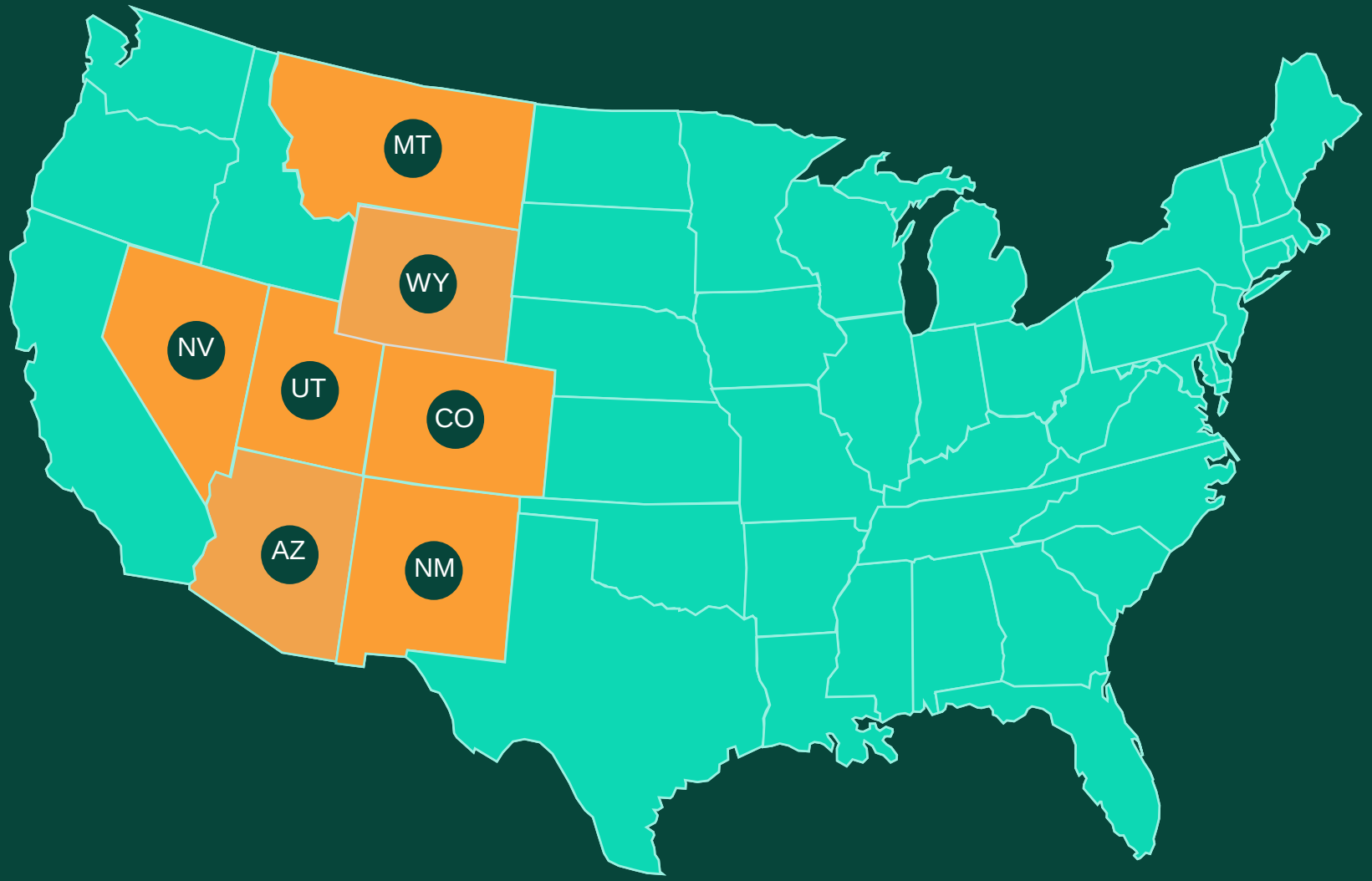
Protect lands and habitat

Healthy Rivers

Keep water in rivers and streams

Clean Energy

Decarbonize the energy sector



Where We Work

- Federal & Regional Collaboration
- State Legislatures
- State Agencies & Commissions
- Local Governments
- Electric Utilities
- Diverse Coalitions & Communities

WRA works across seven states in the **Interior West** to **protect our climate**, land, air, and water.

Our Impact

33 year history

25 legislative bills passed in 2021

$180.5M funding secured by passing priority legislation

10M acres of land protected

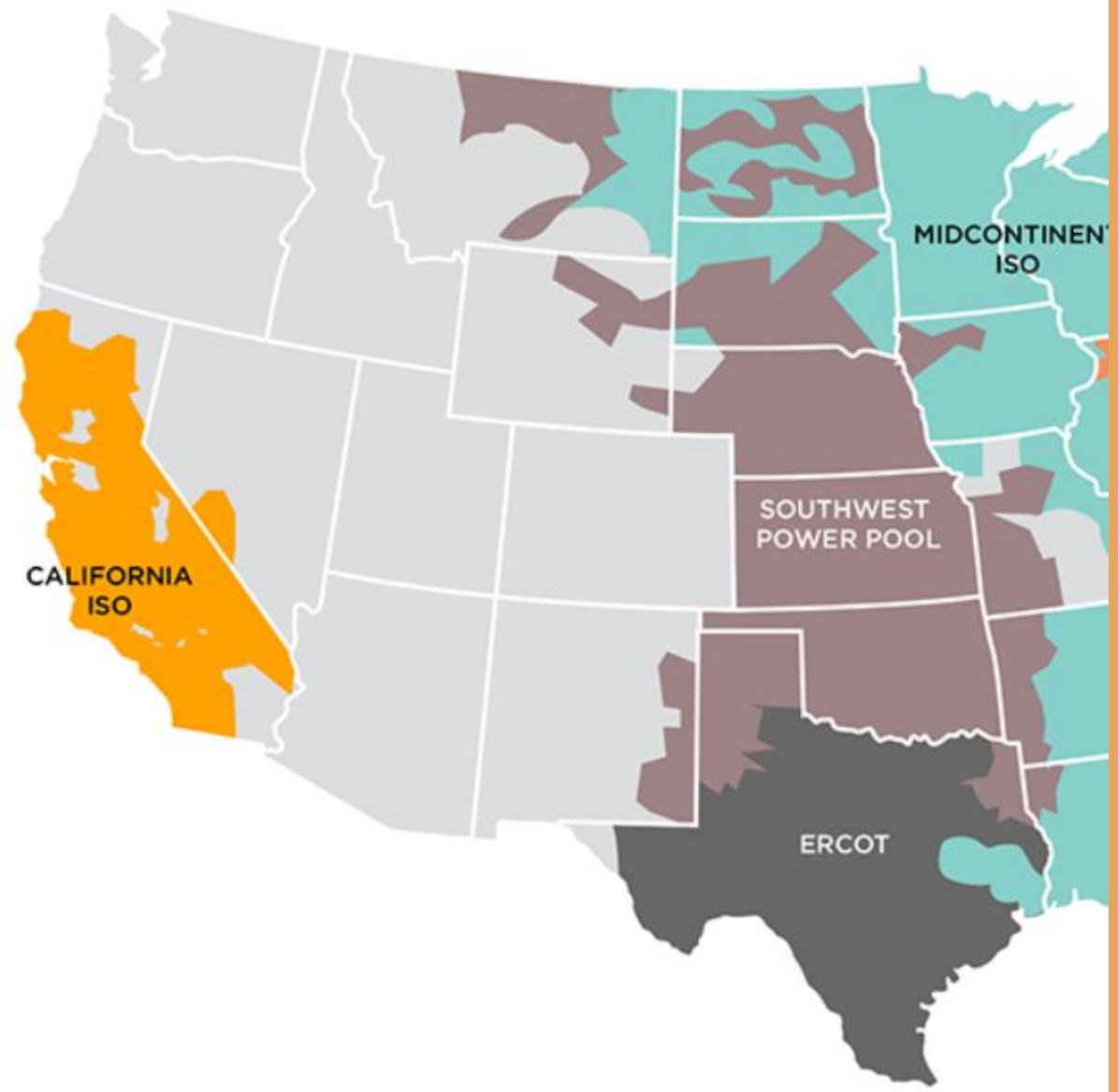
76 MMT annual carbon reductions secured

We respect the different needs of diverse people and partner with them to develop a shared vision for progress — one that **advances communities while protecting biodiversity**.

Tribal Engagement Across WRA's Region

- New Mexico **Energy Transition Act** of 2019
- **Western regional energy markets expansion** webinars and updates.
- **Colorado River policy and management** through the Water and Tribes Initiative.
- Capacity building and connections to resources for **tribal water management** or **stream health** projects.
- Open to additional **partnerships** in the future

Wholesale Electricity Markets in the West

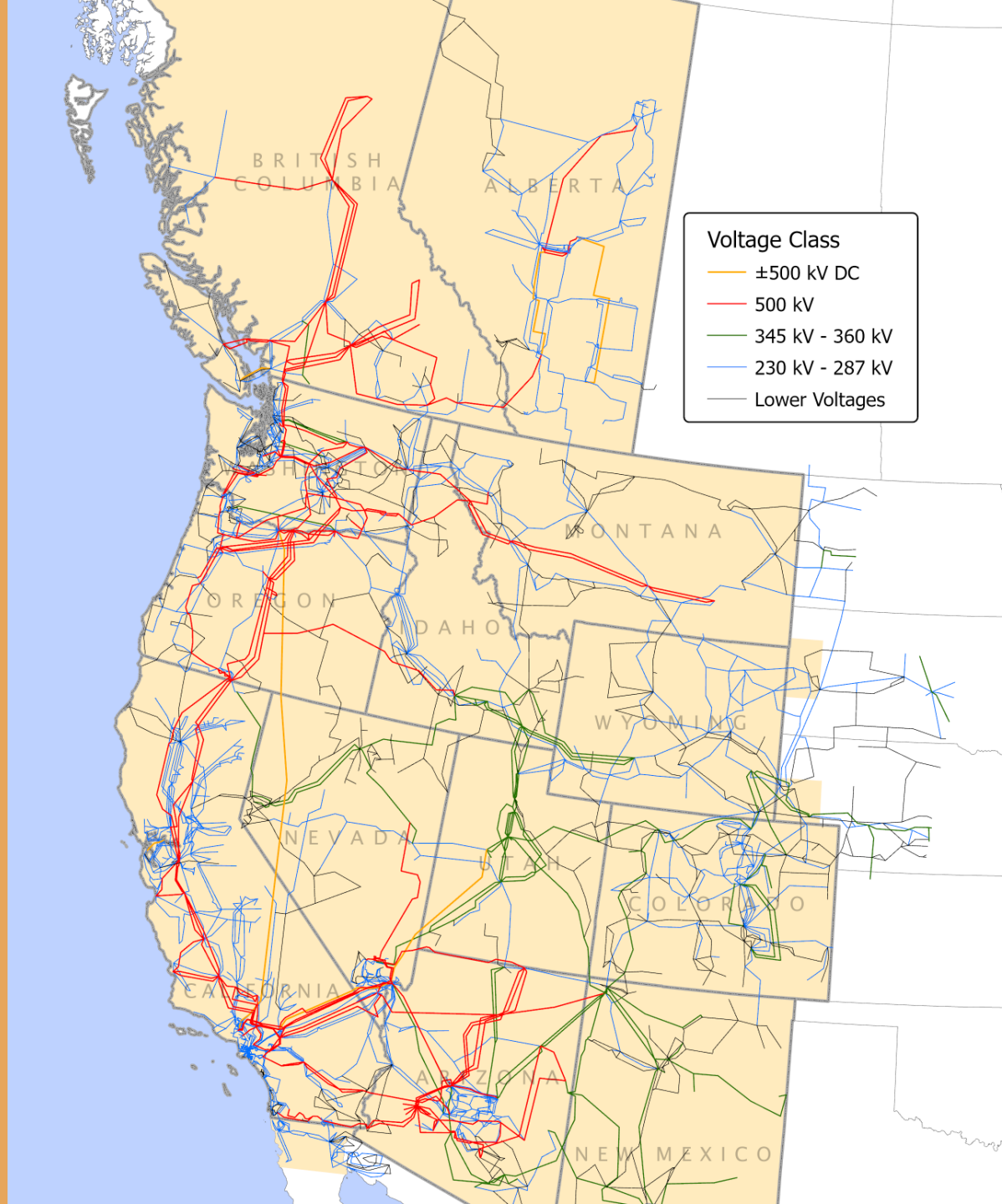


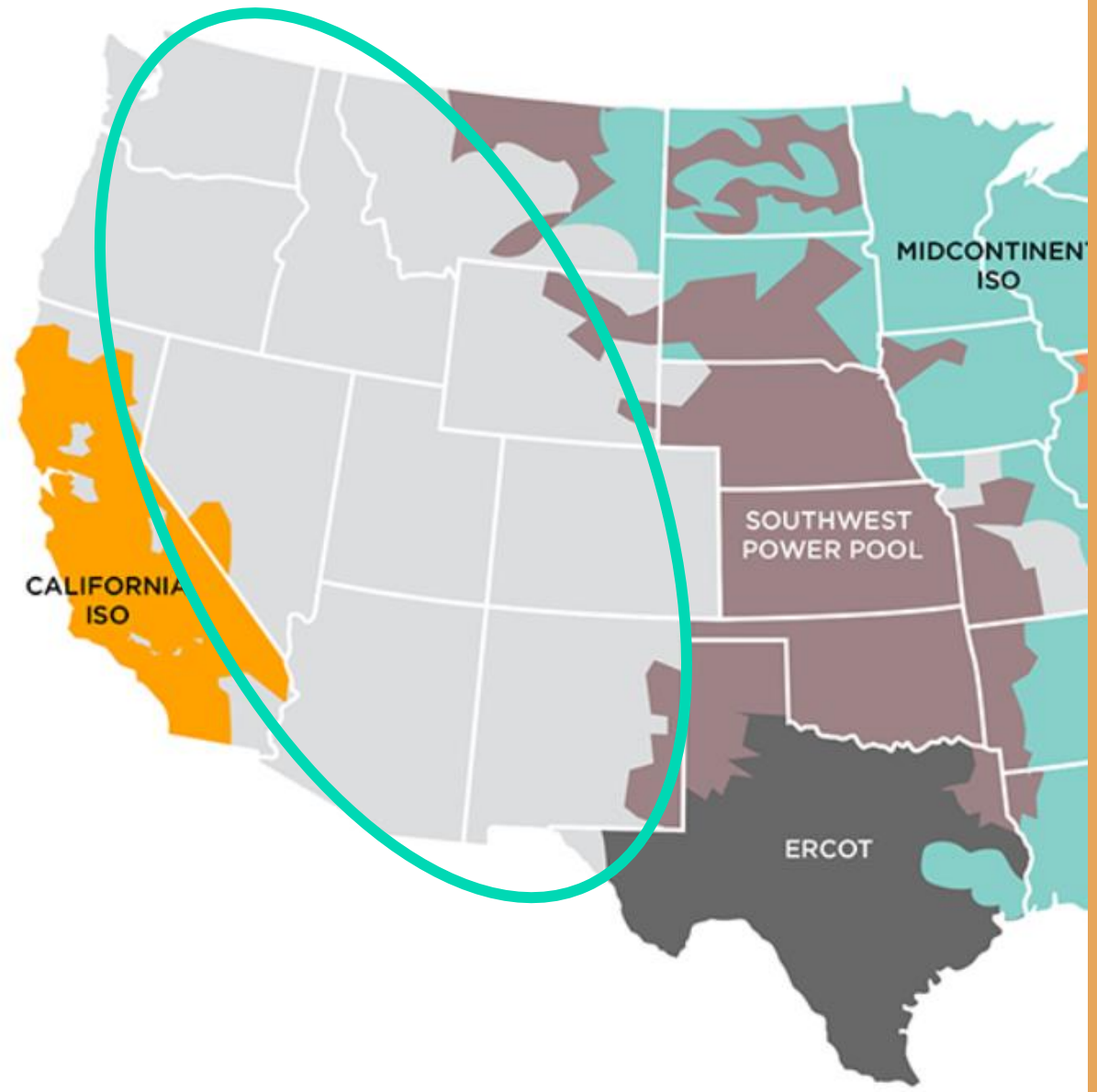
Wholesale electricity markets may impact or be an opportunity for Tribes:

- Broader market for clean energy development
- Potential source of lower cost, lower emissions power
- Mitigate undesirable impacts for Tribal, co-op, rural utilities
- Avenue for participation in grid regionalization, transmission planning efforts

Western Interconnection

- 14 states, 2 provinces, and Baja California
- 80 million+ people
- 134,000 miles of transmission
- 87% public or protected land, including Tribal lands
- Benefits: diverse solar, wind, and hydro resources
- Challenges: renewable resources remote from population centers; wildfires and other risks

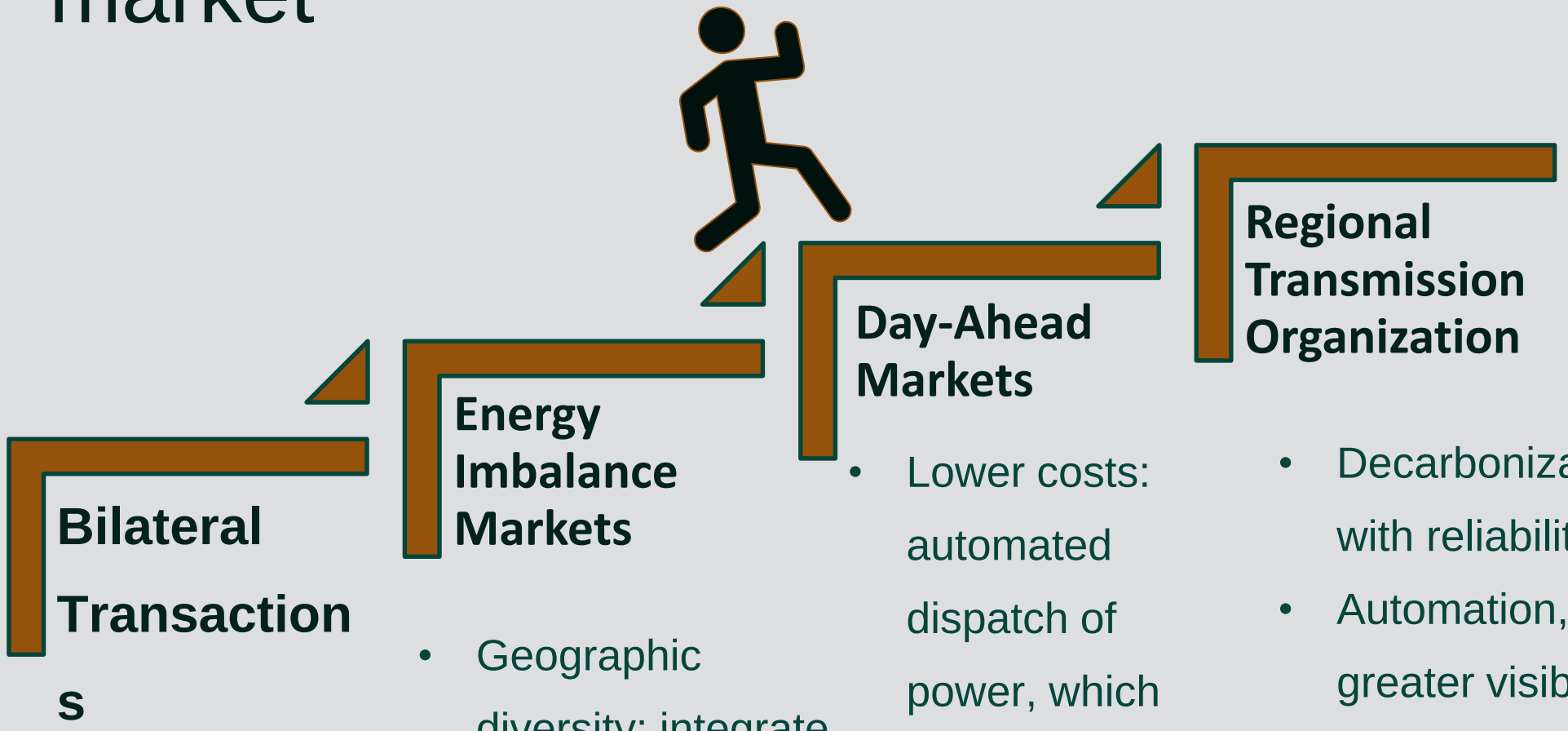




Centralized Grid Operations

- Centralized energy markets (aka RTOs or ISOs) cover the U.S. and Canada
- In centralized energy markets, consolidated market planning and operations happen
- Benefits: automation, efficiency, clean energy development

Progression towards centralized market



- Geographic diversity: integrate variable renewable resources
- Lower costs: automated dispatch of power, which benefits low-cost renewable resources
- Decarbonization with reliability
- Automation, greater visibility
- Opportunity for more stakeholder input

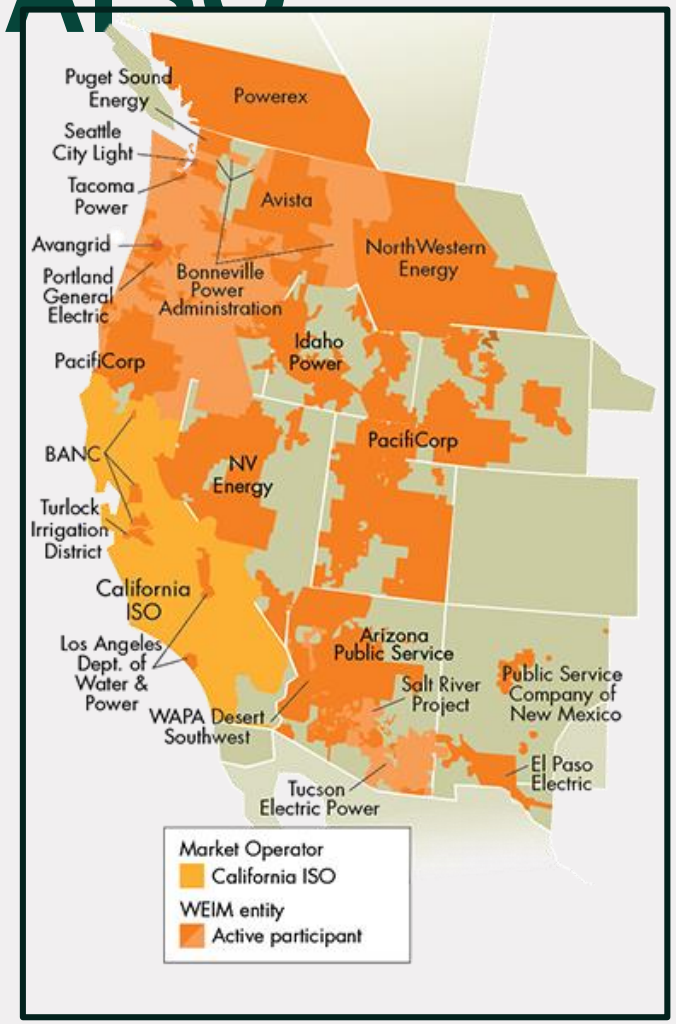
Current & Developing Markets:

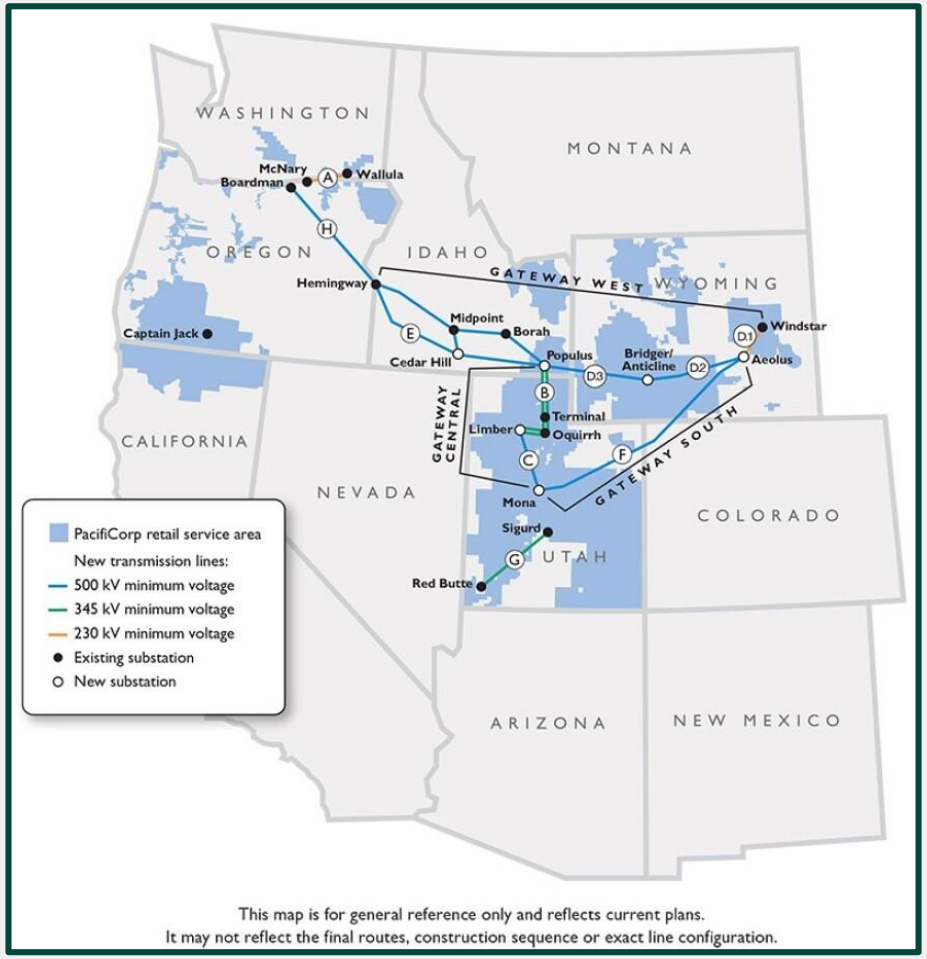
CAISO

- **CAISO (California Independent System Operator)**
  - Only serves CA
  - Legislation developing to expand into a Western RTO
- **WEIM (Western Energy Imbalance Market)**
  - Operating since Nov 2014
  - 82% of the load in West, $1.47 billion in 2022 net benefits
  - 22 participants including: WAPA DSW, TEP, SRP, APS
- **EDAM (Extended Day-Ahead Market)**
  - Tariff filing in June
  - PacifiCorp committed, more to follow

Current & Developing Markets:

CAISO



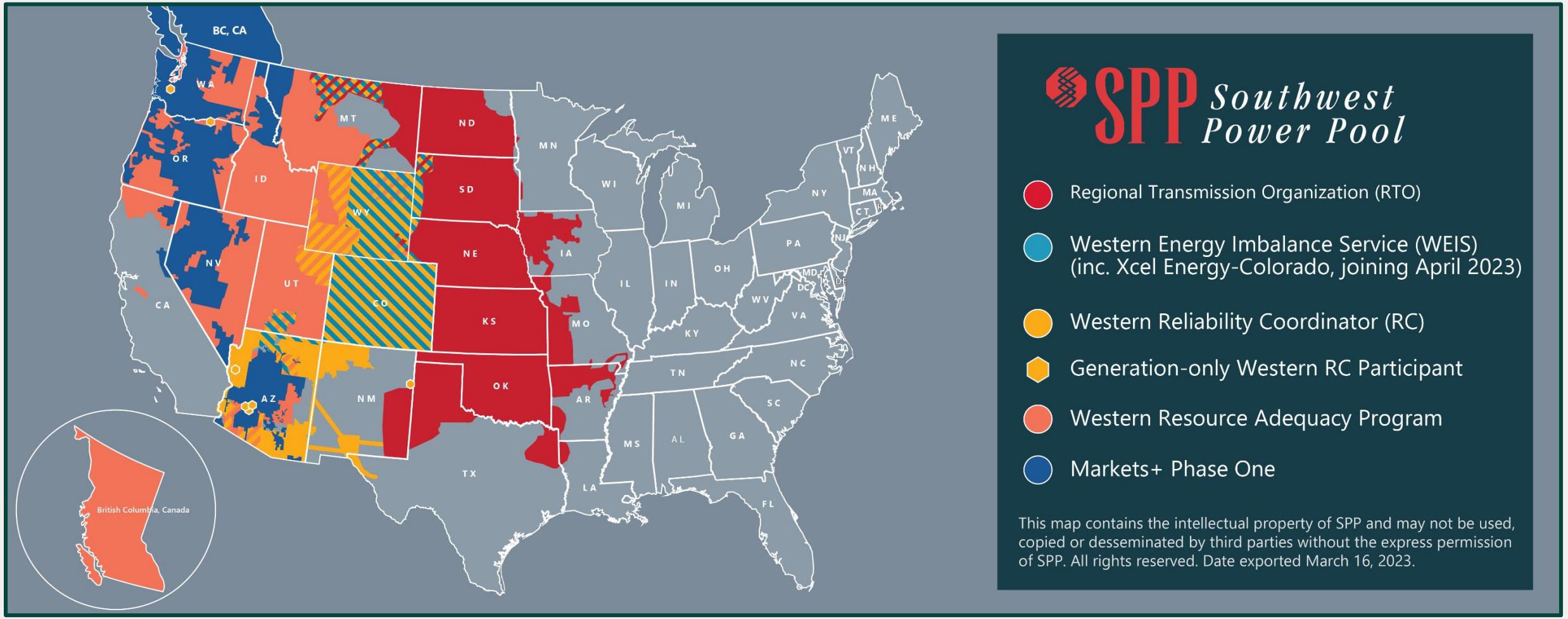


Maps: CAISO, PacifiCorp

Current & Developing Markets: SPP

- **SPP (Southwest Power Pool)**
  - Currently serves central US
  - 7 Western entities exploring entry in ~2026 including WAPA CRSP/RM/UGP
- **WEIS (Western Energy Imbalance Service)**
  - Operating since Feb 2021
  - $31.7 million in 2022 net benefits
  - 12 participants including: WAPA CRSP/RM/UGP
- **Markets+ Day-Ahead Market Phase One**
  - Further development in 2023
  - Many entities signed exploratory agreements including AEPCO, APS, SRP, TEP

Current & Developing Markets: SPP



Map: SPP

WRA: Operating Principles

- **Ideal End State: One West-wide RTO that offers transparency, independence, and flexibility.**
- Automated and optimal dispatch of energy.
- Transparent and accessible market transactions.
- Transparent reporting of economic benefits, market performance, resource efficiency, fuel cost savings, and de-pancaking of transmission.
- Governance processes that allow meaningful representation of a variety of stakeholders to effectively inform market design and implementation.

Upcoming Opportunities

Indigenous Energy Infrastructure Internship

- Hiring intern to focus on assessing Indigenous energy infrastructure, readiness, and priorities for Indigenous Nations in AZ, NM, and NV
- **Apply by May 22:** **https://westernresourceadvocates.org/internships/david-robertson-pathfinder-indigenous-energy-infrastructure-intern/**

Indigenous Energy Infrastructure Internship

WRA Resources & Engagement

- **This is a key moment!**
  - Increasing electricity demand powered by clean sources
  - New markets anticipated in next few years
- **Resources and engagement**
  - In-depth resource on policy, process, and participation
  - Updates and markets overview
  - AZ RTO Roundtable to discuss stakeholder perspectives
  - Support letters or other resources for pursuing federal funds

Questions?

Western Resource Advocates®

Thank You!

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Questions

- What benefits or challenges do you see to your Tribal utility in expanding regional electricity markets?
- What information or support from WRA would be useful to you on wholesale markets?
- What are your energy goals and priorities?
- How do you engage with the ACC? CAISO or SPP? WAPA or other utilities?