



Greenhouse Gas Accounting in Regional Electricity Markets

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Vijay A Satyal – Deputy Director, Regional Energy Markets

About Western Resource Advocates

We're tackling the largest sources of carbon pollution, improving air quality for nature and people, protecting and restoring our rivers and water supply, and connecting the West's unparalleled landscapes.



Our Work

WRA fights climate change and its impacts to sustain the environment, economy, and people of the West.



Our Approach

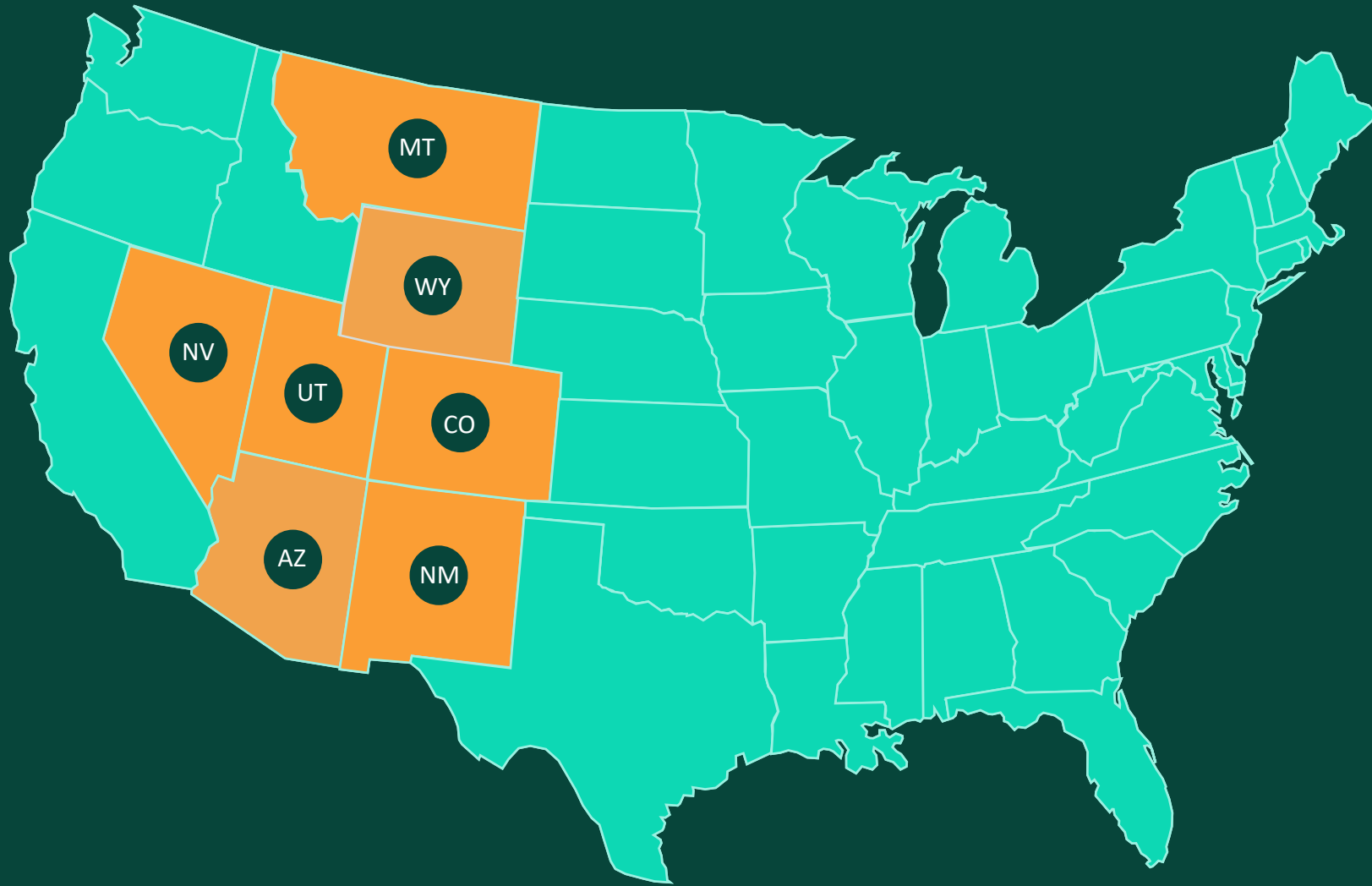
Working where decisions are made, sweating the details, and creating evidence-based solutions.



Our Team

Policy experts, scientists, economists, engineers, attorneys, fundraisers, and communications professionals leverage our unique strengths.





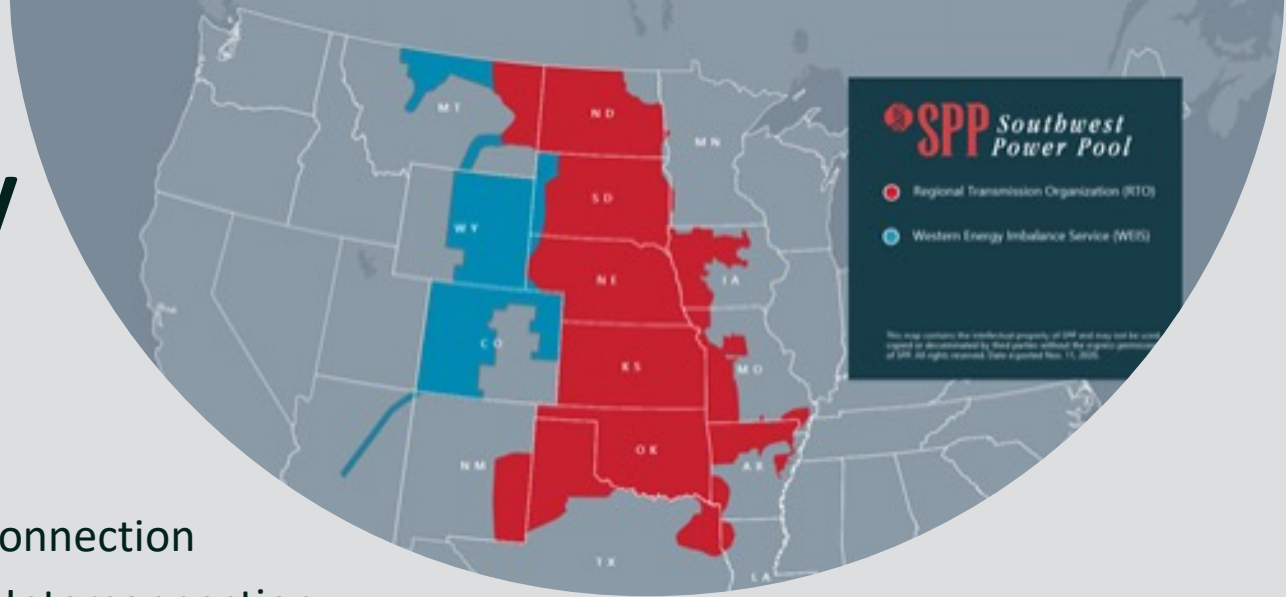
Where We Work

- 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.**



Western Markets - Today



CAISO: Western EIM

- \$2.0 billion in gross benefits (since 2014)
- By 2022 will cover 82% of the load in Western Interconnection
- Only ~ 5% of energy market transactions in Western Interconnection

CAISO: Extended Day-Ahead Market (EDAM)

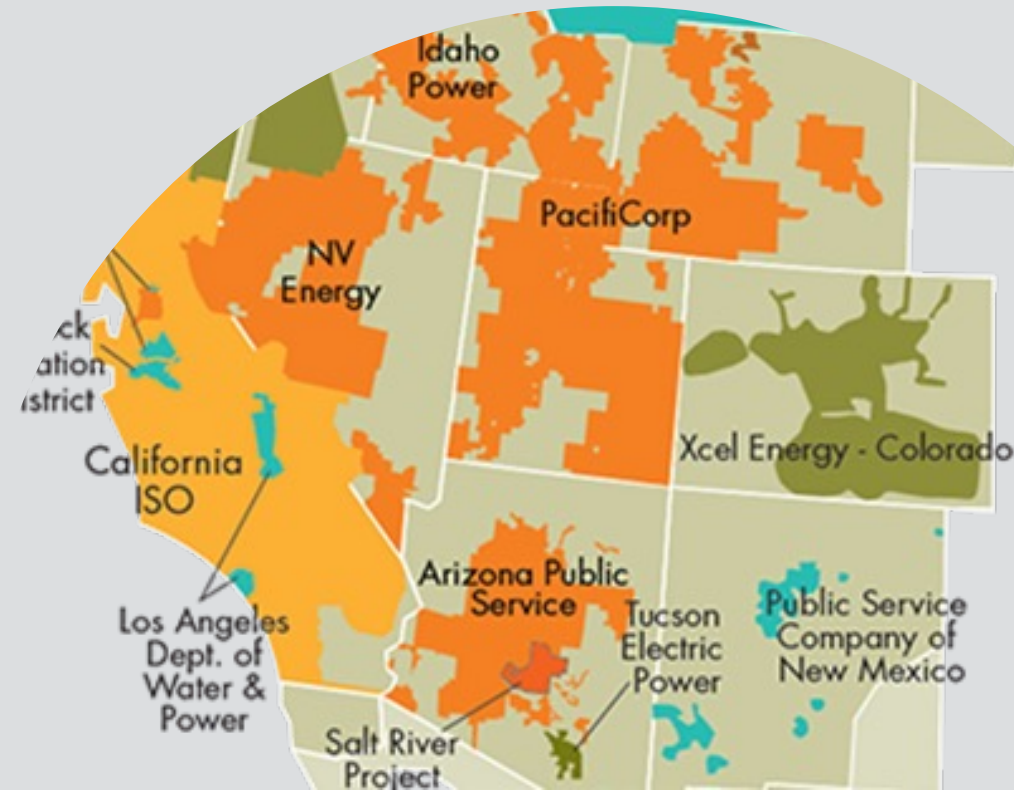
- 32,591 metric tons of avoided CO2 curtailments
- Stakeholder initiative began in Oct. 2019; **Tariff at FERC under review**

SPP: Western Energy Imbalance Service (WEIS)

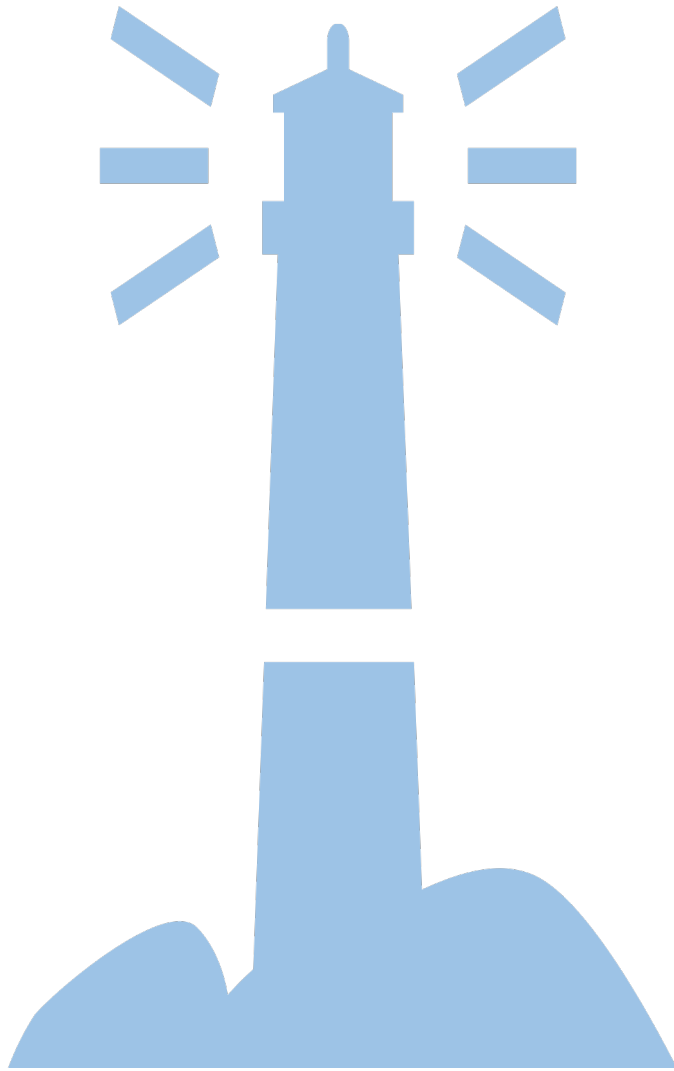
- Dec. 2020: FERC approves WEIS tariff
- Jan. 2021: WEIS begins market operations

SPP: Day-Ahead Markets+

- Feb 2023: SPP announces 10+ western utility interest in joining M+



Context and Relevance for West-Wide GHG Accounting



Reliably decarbonized and cost-effective grid

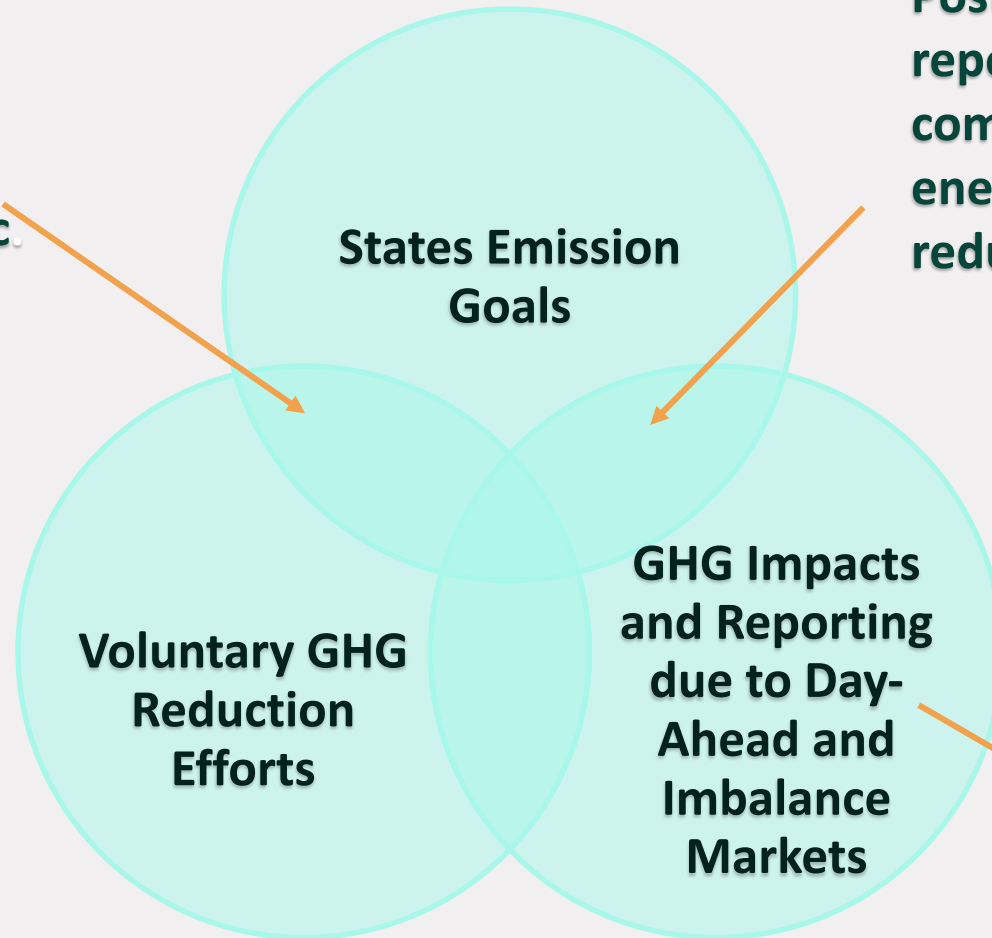
- *Decarbonization needs*
- *Changing resource mix*
- *Grid economics*
- *Clean energy policies*
- *States' goals/criteria*

- **WRA perspective:** Grid economics warrants change, so regional coordination for energy needs is timely.
- **WRA & Western PIOs:** Great strides and respect state compliance criteria for GHGs, REC policies, etc.

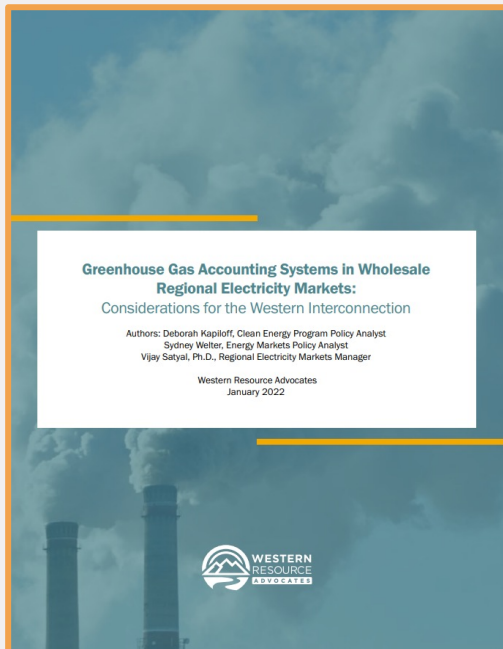
Need for GHG Reporting

GHG market design rules on leakage, unspecified power, etc.

Post-dispatch GHG reporting and state compliance w/ clean energy or GHG reduction policies



Post-dispatch GHG reporting best practices





Split Day-Ahead Markets in the West

- **Implications of a Bifurcated market -**
 - Develop a larger and shared understanding of the makeup and implications of a bifurcated market.
 - GHG accounting seams: all resource tracking and reporting project – partnership with Grid Lab, CEBA and allies
 - Market monitoring best practices/reporting around clean energy, economics
- **Lessons from Eastern Organized Markets**
 - What worked? What are the pitfalls to track?
 - What are the experiences of clean energy advocates?



Day-Ahead Markets: GHG Reporting

- Markets should include a transparent and robust reporting system.
- Accurate reporting of the attributes associated with power flows:
 - Guides fair pricing for all generating resources.
 - Supports resource dispatch in compliance with state clean energy or emissions reduction policies.
 - Provides emissions profile data for utilities, other market participants, and buyers to inform investments and compliance.

Both CAISO EDAM and SPP Markets+ processes recognize seams and state compliance considerations.

Next Phase Partners



- *Renewable Northwest*
- *Northwest Energy Coalition*
- *GridLab*
- *GridLab*
- *Gridworks*
- *Energy Strategies*
- *Clean Energy Buyers Association*
- *Renewable Northwest*
- *Northwest Energy Coalition*

2023 Expected Deliverables

- Develop three tiers of **technical specifications for robust reporting** in a West-wide platform for 1) day-ahead market operators and participants, 2) clean energy buyers, and 3) state agencies.
- WRA partnering with CEBA, Gridworks, GridLab, Energy Strategies, RNW, NWECC.
- Ideal End-State: Propose a formal exploration of a **one-stop, West-wide emissions tracking platform** housed under a neutral, third-party entity.



Competing Interests: Energy Markets in the West



We get it! Rome took a long time to build! Get markets right but let's also move away from (bilateral) status quo!



We get it! Current rights & contracts matter. However long-term benefits outweigh short term; need to remove barriers to efficient and inclusive participation

Questions?