Greenhouse Gas Tracking in the West:

State Agency Listening Tour & 2023 Recommendations

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WesternResourceAdvocates.org

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AGENDA

GHG Tracking & Reporting

1. Intro to WRA
2. Relevance of GHG Tracking
3. State Listening Tour Findings
4. 2023 Priorities & Recommendations
5. Q&A & Next Steps

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

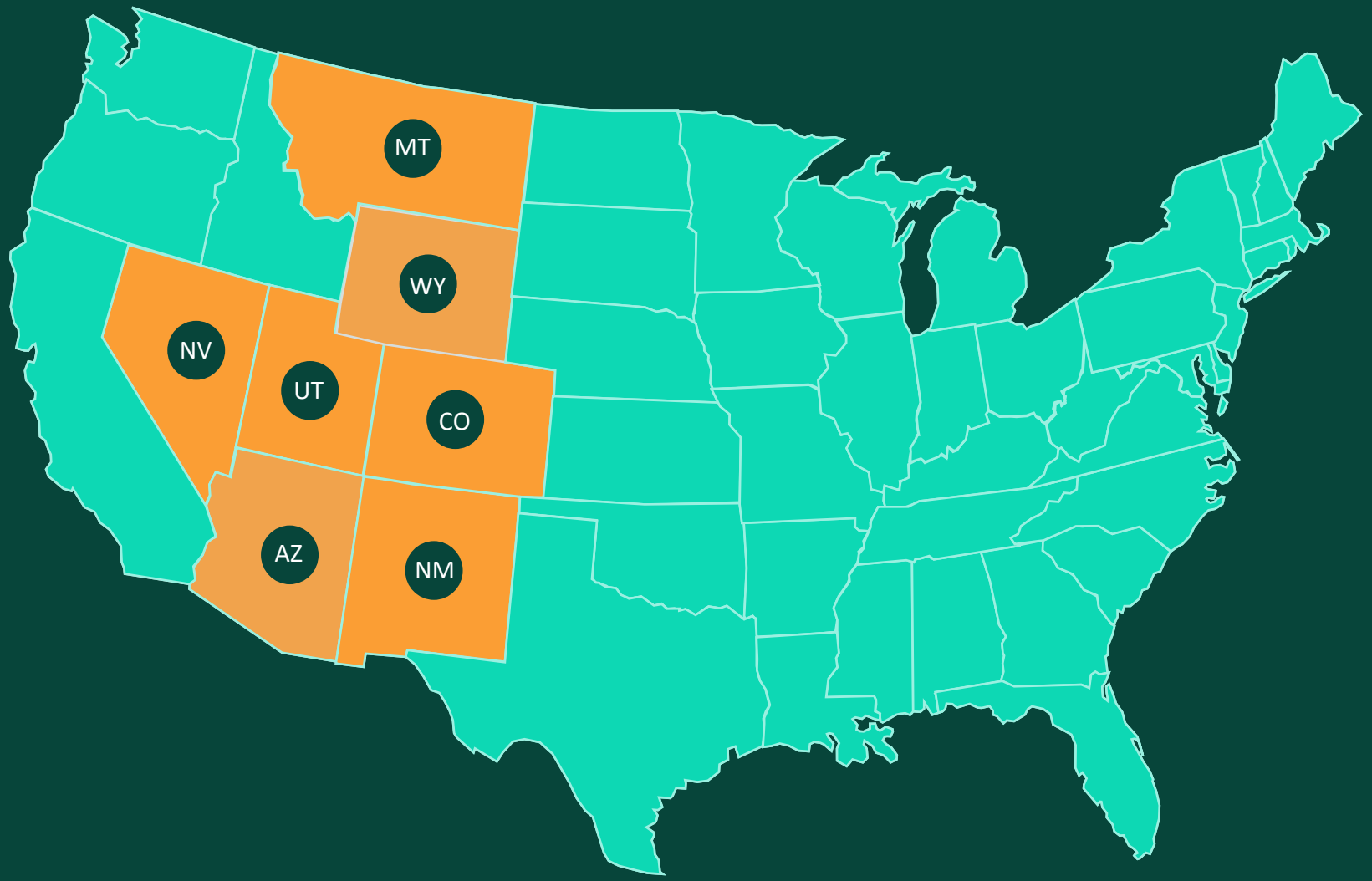
WRA fights climate change and its impacts to sustain the environment, economy, and people of the West.

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.

Listening Tour Partners

- *Renewable Northwest*
- *Northwest Energy Coalition*
- *GridLab*

Next Phase Partners

- *GridLab*
- *Gridworks*
- *Energy Strategies*
- *Clean Energy Buyers Association*

Why does West-Wide GHG reporting matter?

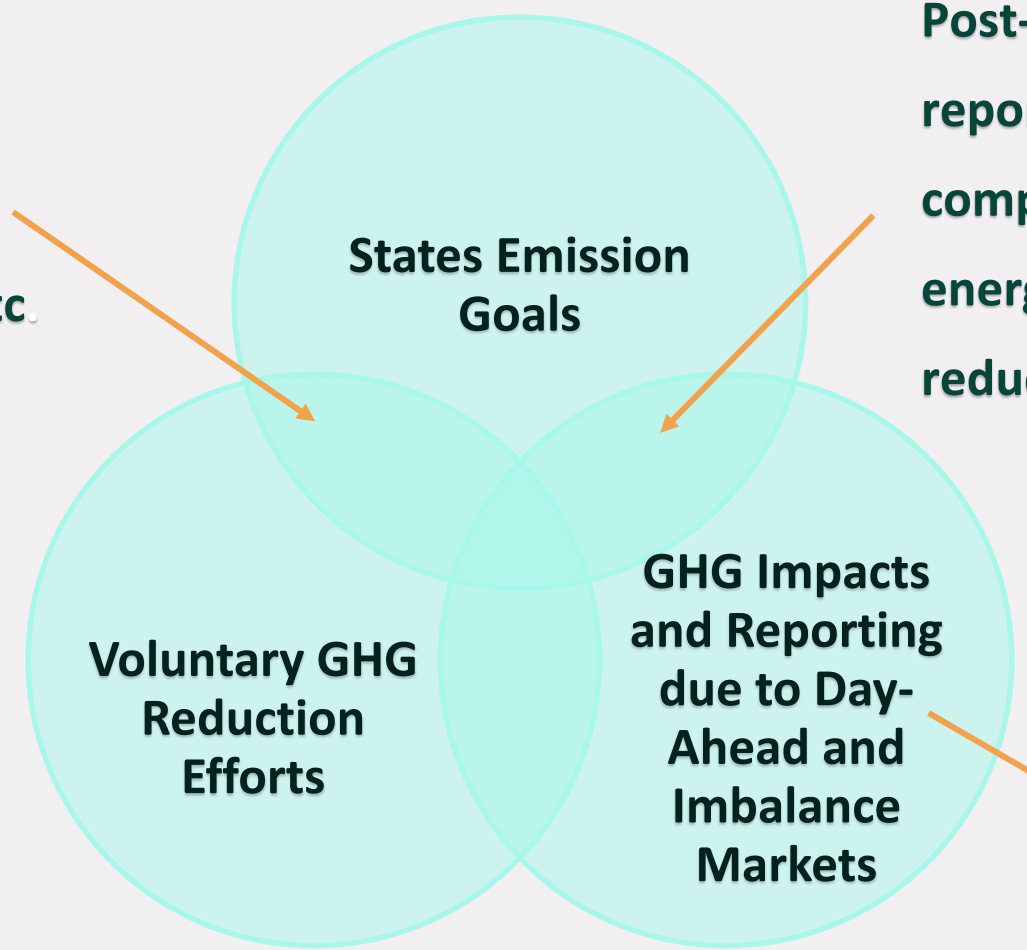
Context and Relevance of GHG Accounting

- Rationale:
  - Clean energy integration through wholesale markets, decarbonizing the grid with reliability, efficiency, fairness, and transparency.
  - Complying with Western state clean energy or emissions reduction goals and mitigate leakage through markets.
- Current knowledge gap:
  - How can we best account for greenhouse gas emissions across states as we regionalize wholesale markets?
  - What are the current level of emissions in the Western Interconnection and potential future reductions due to a regional wholesale market?

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

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.

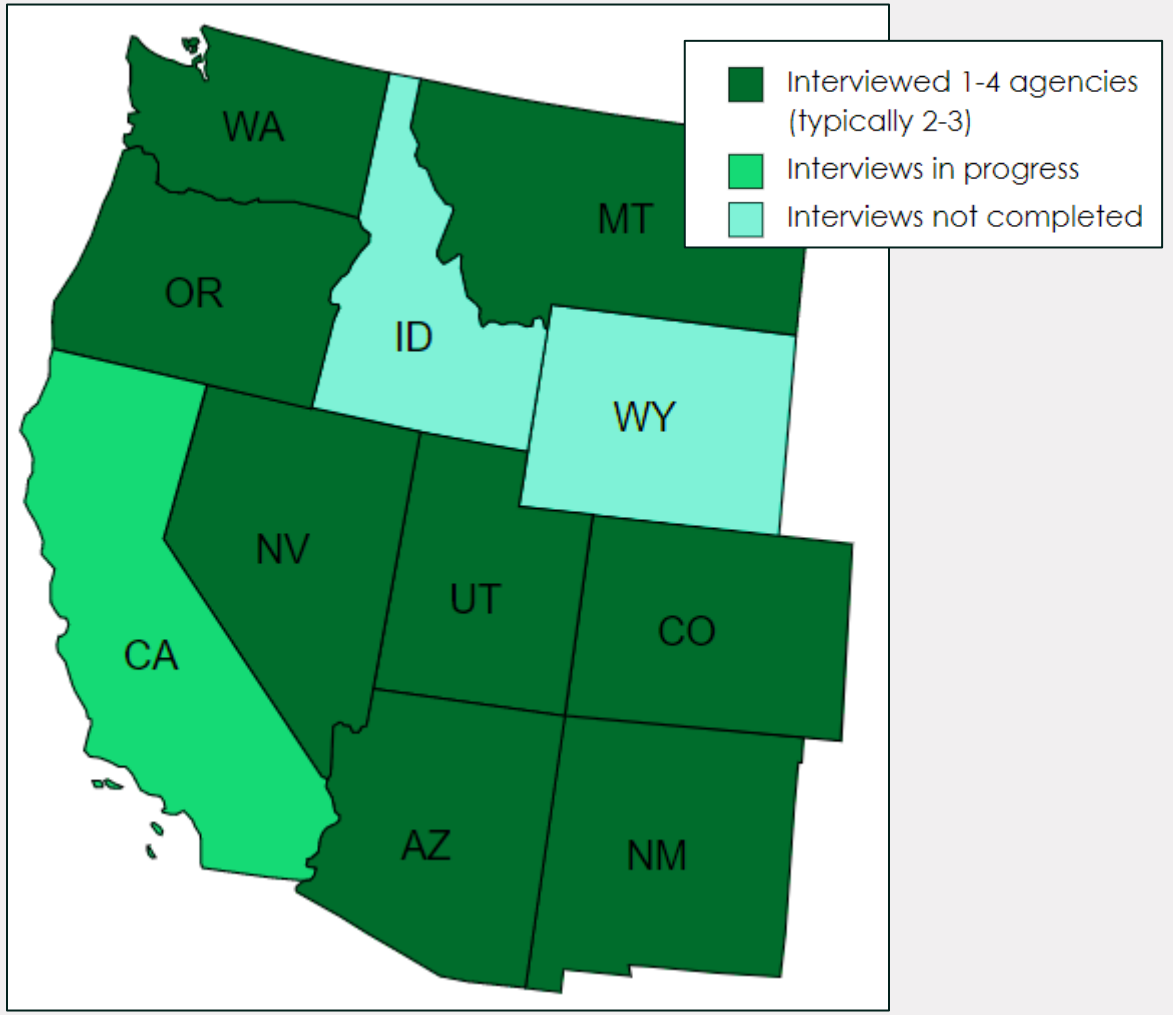
What did we learn from Western states?

Western States Listening Tour

- New effort to explore state needs!
- WRA (w/ GridLab, Renewable Northwest, Northwest Energy Coalition) met state agencies to understand current capabilities and tools, as well as future needs, for greenhouse gas accounting
- Discussions with other stakeholders: M-RETS, WREGIS, clean energy buyers, utilities

State Agencies

- Departments of energy, environment, air, natural resources or similar
- Governor's offices
- Utility commissioners and/or commission staff
- Consumer advocates

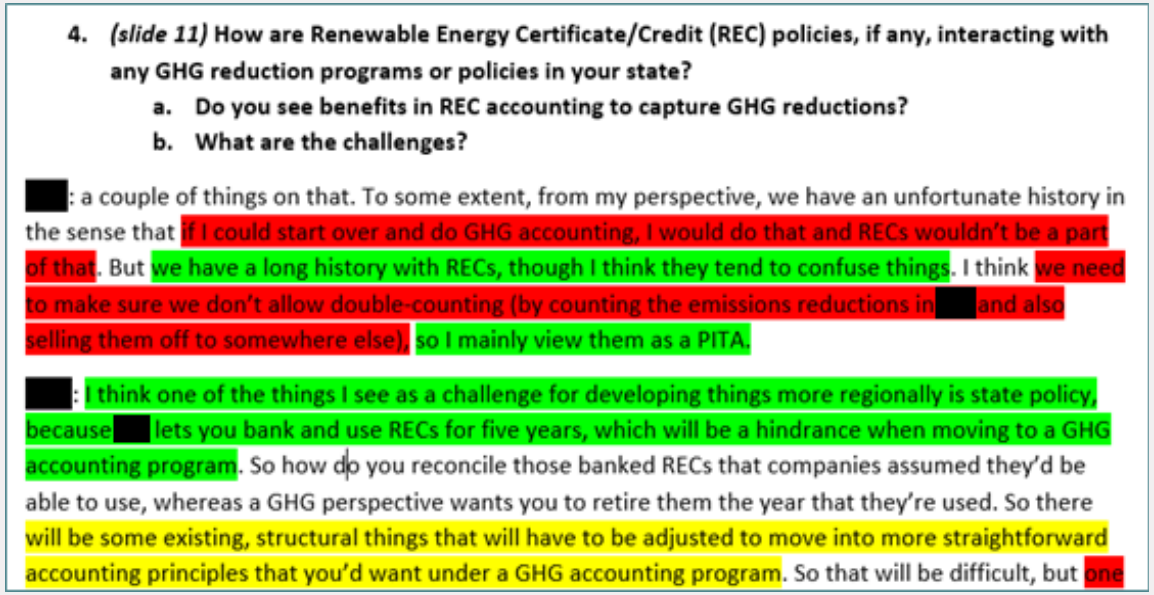


Interview Questions

- What is your overall perspective on GHG tracking and/or clean energy tracking at a: State level? Western regional level?
- What are the current GHG policies, existing mechanisms and compliance tools, if any are used in your state? If not, is anything voluntarily being undertaken?
- What are the current challenges in tracking emission, or zero-emission, attributes associated with regional energy flows (energy imports or exports)?
- How are Renewable Energy Certificate/Credit (REC) policies, if any, interacting with any GHG reduction programs or policies in your state? Do you see benefits in REC accounting to capture GHG reductions? What are the challenges?
- If a regional entity created a West-wide platform for GHG tracking, what areas of coordination between your state and the entity would be essential for state-level compliance?

Method of Transcription

- Attitudinal analysis of standardized questions
- Third-person transcription of findings to reduce bias
- Identifying **observations**, **concerns**, and **positions**



4. *(slide 11)* **How are Renewable Energy Certificate/Credit (REC) policies, if any, interacting with any GHG reduction programs or policies in your state?**
    a. **Do you see benefits in REC accounting to capture GHG reductions?**
    b. **What are the challenges?**

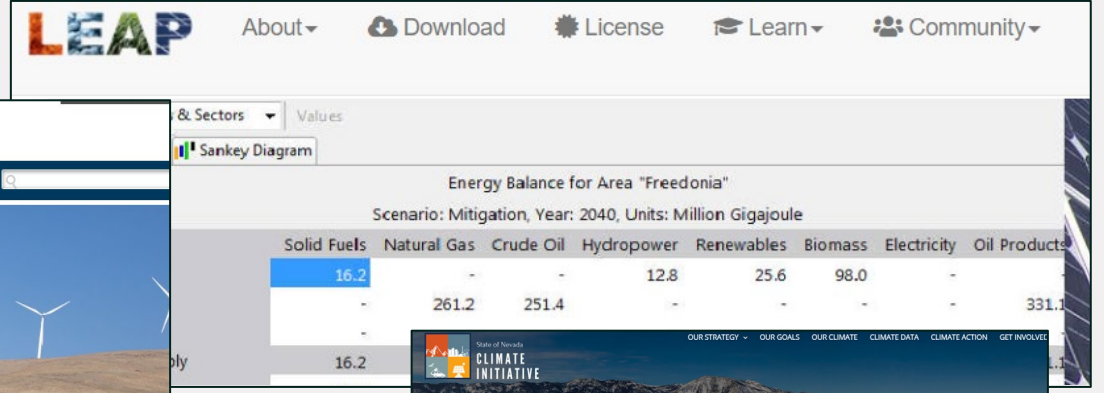
[redacted]: a couple of things on that. To some extent, from my perspective, we have an unfortunate history in the sense that if I could start over and do GHG accounting, I would do that and RECs wouldn't be a part of that. But we have a long history with RECs, though I think they tend to confuse things. I think we need to make sure we don't allow double-counting (by counting the emissions reductions in [redacted] and also selling them off to somewhere else), so I mainly view them as a PITA.

[redacted]: I think one of the things I see as a challenge for developing things more regionally is state policy, because [redacted] lets you bank and use RECs for five years, which will be a hindrance when moving to a GHG accounting program. So how do you reconcile those banked RECs that companies assumed they'd be able to use, whereas a GHG perspective wants you to retire them the year that they're used. So there will be some existing, structural things that will have to be adjusted to move into more straightforward accounting principles that you'd want under a GHG accounting program. So that will be difficult, but one

Overall Trends for States

- Seeking to ensure data from markets **supports state compliance**.
- Interest in **greater coordination** with other states, market operators, and **flexible tracking platforms or tools**.
- Using **different mechanisms to track energy**: RECs, state credit systems, data/models from government or environmental organizations, greenhouse gas inventories, IRPs.
  - No one tool is currently enough to meet all needs!
- Harder to track **emissions from energy imports and exports**.
- Interest in **upgrades in greenhouse gas tracking**, especially with move to regional markets.


NVTREC
NEVADA TRACKS RENEWABLE ENERGY CREDITS
RENEWABLE ENERGY PORTFOLIO CREDIT STA
SUMMARY OF THE NEV
The Nevada Renewable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Sankey Diagram
Energy Balance for Area "Freedonia"
Scenario: Mitigation, Year: 2040, Units: Million Gigajoule
Solid Fuels Natural Gas Crude Oil Hydropower Renewables Biomass Electricity Oil Products
16.2 12.8 25.6 98.0
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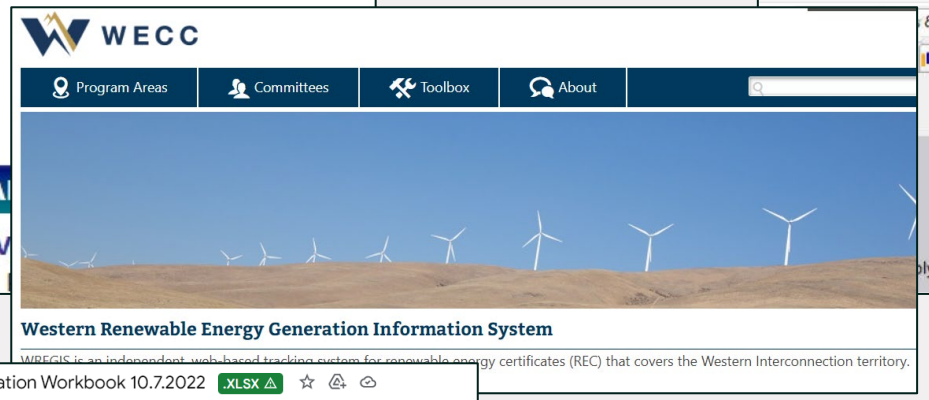
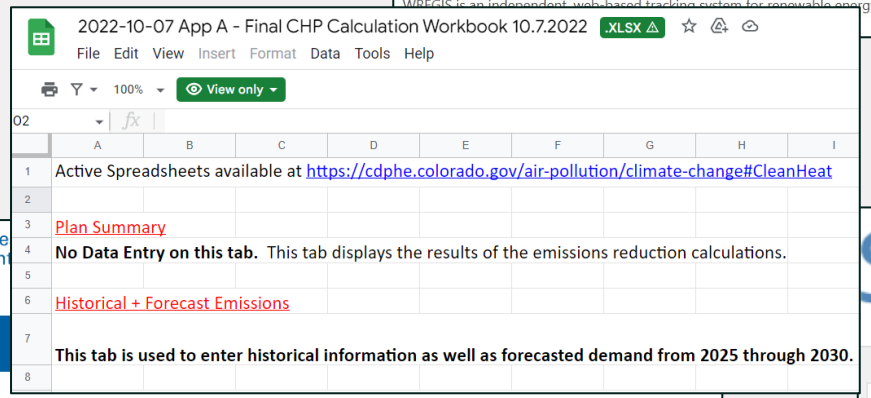

WECC
Program Areas
Committees
Toolbox
About
Western Renewable Energy Generation Information System
WREGIS is an independent, web-based tracking system for renewable energy certificates (REC) that covers the Western Interconnection territory.


CLIMATE INITIATIVE
NEVADA'S CLIMATE STRATEGY
MONITORING, MODELING, AND MANAGING GREENHOUSE GAS


2022-10-07 App A - Final CHP Calculation Workbook 10.7.2022
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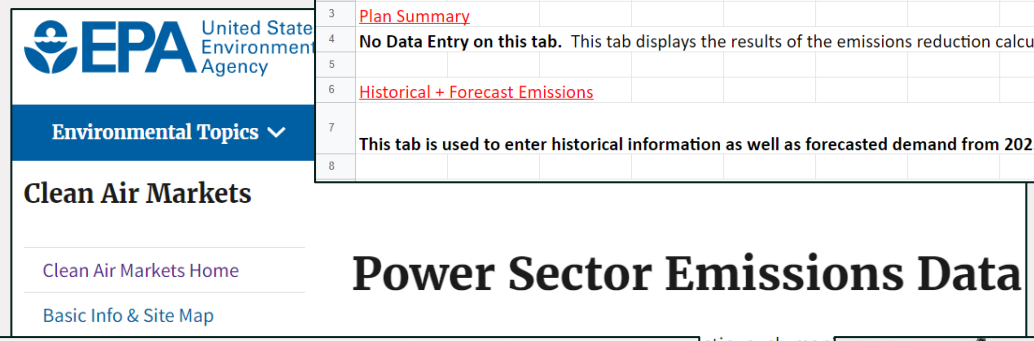
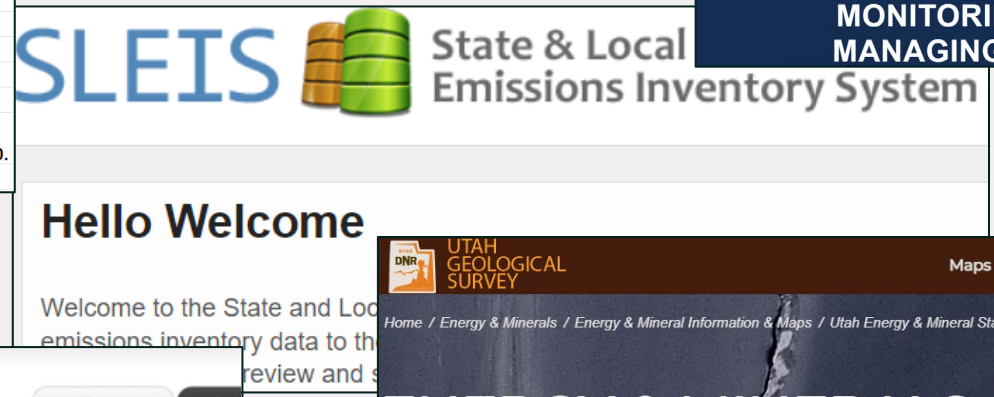
Active Spreadsheets available at https://cdphe.colorado.gov/air-pollution/climate-change#CleanHeat
Plan Summary
No Data Entry on this tab. This tab displays the results of the emissions reduction calculations.
Historical + Forecast Emissions
This tab is used to enter historical information as well as forecasted demand from 2025 through 2030.


EPA United States Environmental Agency
Environmental Topics
Clean Air Markets
Clean Air Markets Home
Basic Info & Site Map
Power Sector Emissions Data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State & Local Emissions Inventory System
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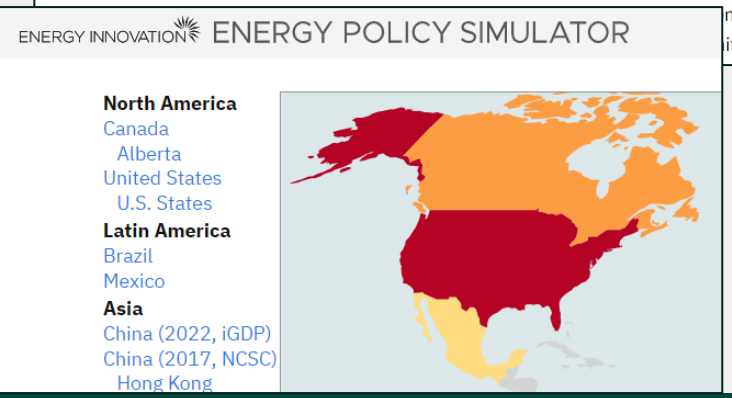
ENERGY INNOVATION ENERGY POLICY SIMULATOR
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Alberta
United States
U.S. States
Latin America
Brazil
Mexico
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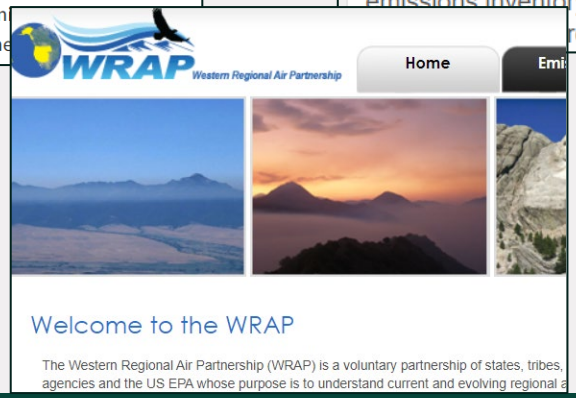
China (2022, iGDP)
China (2017, NCSC)
Hong Kong


WRAP Western Regional Air Partnership
Home
Welcome to the WRAP
The Western Regional Air Partnership (WRAP) is a voluntary partnership of states, tribes,
agencies and the US EPA whose purpose is to understand current and evolving regional a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States w/ GHG Reduction Policies (1)

Many states with greenhouse gas reduction policies expressed strong interest in:

- Ability to track emissions associated with imports and exports, not just in-state generation serving in-state load.
- Increased staff capacity and better tools for accurate tracking.
- Increased coordination between sister agencies on tracking and compliance.

States w/ GHG Reduction Policies (2)

Many states with greenhouse gas reduction policies expressed strong interest in:

- Consistent data that can be used by utilities, state agencies, and energy customers to support unique policies and goals.
- State-by-state data for multi-state utilities' compliance needs.
- Understanding neighboring state policies for greenhouse gas or clean energy tracking.

States w/out GHG Reduction Policies

Many states without active or mandatory greenhouse gas reduction policies expressed strong interest in:

- Practical ways to track data used by utilities and the state for voluntary goals or measuring investments and changing portfolios.
- Understanding energy flows and how in-state generation is being used to serve other states or native load.
- Ensuring any mechanism is flexible and supports unique state policies and goals.

Other Stakeholder Interests

- Utilities: Seeking to maintain compliance with state mandates or voluntary decarbonization initiatives.
- Tracking platform providers: Improved software, more open-source development of tracking mechanisms.
- Clean energy buyers: 24/7 tracking to advance decarbonization.
- Environmental organizations: Track decarbonization progress and measure expected benefits of markets.

What are the next steps for West-wide GHG tracking?

Measures of Progress

2023 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, NWEC.
- Propose a formal exploration of a **one-stop, West-wide emissions tracking platform** housed under a neutral, third-party entity (e.g. WECC?).

Advisory WG Workshop

WRA, with professional facilitation from Gridworks, will host an workshop for stakeholders to discuss respective needs and eventually develop a roadmap for West-wide greenhouse gas reporting.

When: Late Spring 2023 TBD

Where: Virtual and In-Person Options TBD

Questions?

Western Resource Advocates

Thank You!

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