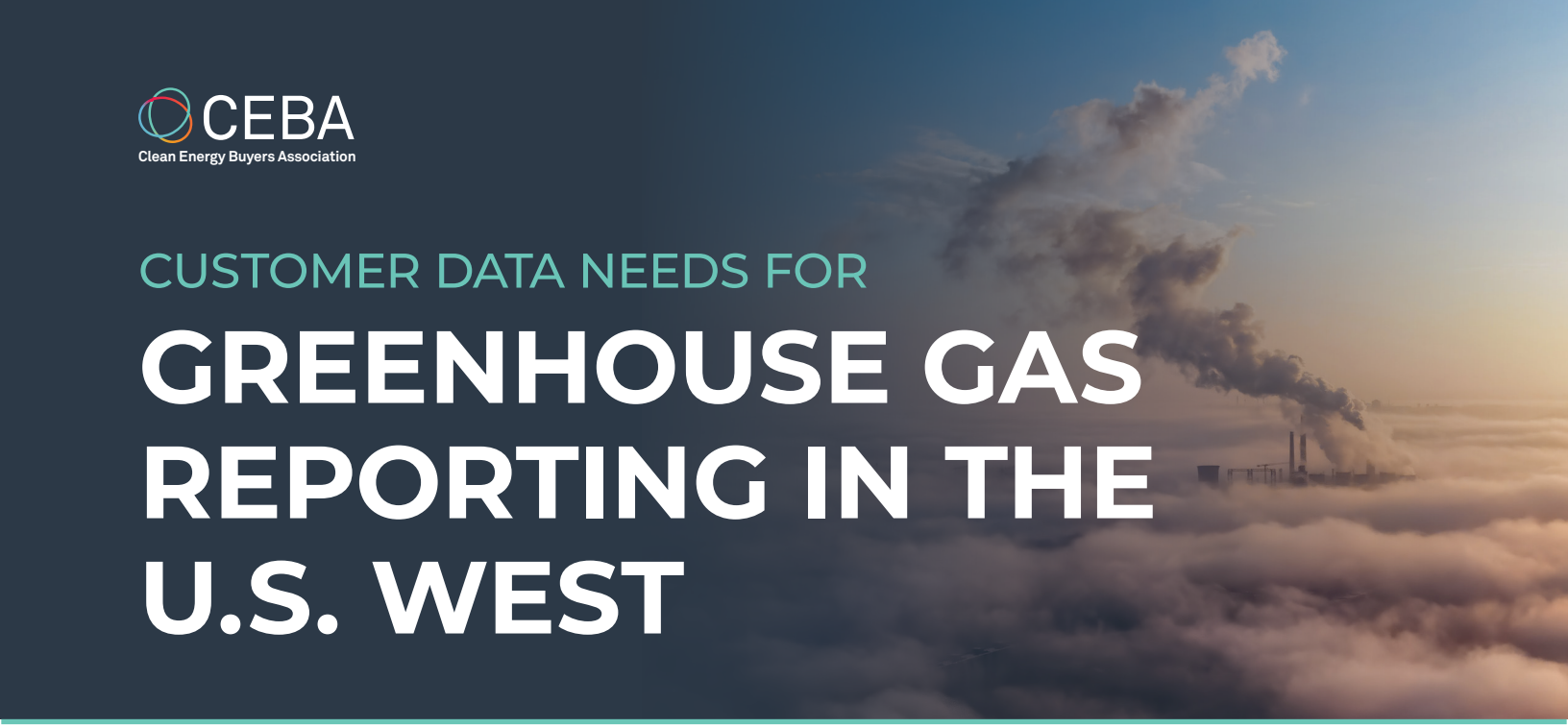
CEBA
Clean Energy Buyers Association



CUSTOMER DATA NEEDS FOR

GREENHOUSE GAS REPORTING IN THE U.S. WEST

As expanded wholesale electricity markets develop across the western United States, the creation of a centralized West-wide greenhouse gas reporting framework has become essential, along with robust data metrics to support it. The West now has an important opportunity for new markets to provide cohesive, granular, and actionable data that customers need in order to meet their clean energy goals.

Gridworks, Western Resource Advocates (WRA), and the Clean Energy Buyers Association (CEBA) have developed recommendations for minimum greenhouse gas reporting metrics for day-ahead markets across the West, to support the needs of key stakeholders.

If widely adopted, these recommendations would cohesively address the needs of Western day-ahead energy market participants, state regulatory agencies, and clean energy buyers.

The recommendations are intended to promote a shared understanding and standard for greenhouse gas accounting across the West, ensure fair and accurate emissions allocation, and avoid double counting of emissions across all generation sources.

The metrics are intended to serve multiple stakeholder needs, including:

- Tracking progress for state, utility, and customer greenhouse gas reduction goals;
- Preventing double counting of claims;
- Understanding the impact of changes to generation and load; and
- Informing the calculation of market total average, marginal, and residual emissions.

The metrics establish a baseline for meeting the needs of all stakeholders across the West. Beyond this baseline, customers also need more granular, detailed, and accurate information about the electricity they buy from current and emerging electricity markets, to encourage and expand their voluntary purchases that help decarbonize the grid.

Regional transmission organizations (RTOs) and other organized electricity market structures benefit customers by centralizing data collection. Without a centralized data source, customers must go through the time-intensive process of requesting information from individual utilities. Electricity market decision-makers can improve data usability by increasing the reporting frequency, granularity, and completeness of information.

WHY DO CUSTOMERS NEED ACCURATE EMISSIONS DATA?

As more large energy customers set voluntary carbon reduction targets, they report progress through systems like the Carbon Disclosure Project, using the Greenhouse Gas Protocol standards. When reporting emissions from purchased electricity, known as Scope 2 emissions, thousands of companies that report to the Carbon Disclosure Project using the protocol must follow emissions accounting guidance that dictates certain data hierarchies, which push for better quality data. The mandatory disclosure landscape for corporate emissions also is rapidly evolving, with new emissions disclosure requirements recently passed and more to come.

For basic reporting, customers need access to data that estimates the average emissions of delivered electricity they receive and the resource mix specific to their supplier. Customers must use two methods to calculate or report Scope 2 emissions. Both methods have a stated hierarchy of accepted emissions factors:

- **The location-based method** uses average emission intensity of the grid where the consumption occurs. This is meant to be the most physically accurate representation of the emissions associated with a given customer's electricity consumption.
- **The market-based method** accounts for the fact that customers can contract for electricity that is not tied to their physical consumption but still has an impact on the grid and emissions. Examples of market-based procurement are renewable energy certificate (REC) purchases, power purchase agreements (PPAs), and utility programs.

WHICH METRICS ARE MOST IMPORTANT TO CUSTOMERS?

Customers need three key emissions metrics for accounting and reporting emissions to meet the Scope 2 standards of the Greenhouse Gas Protocol. The **average emissions metric** represents the emissions generated within a specific geographic region over a given time, divided by the amount of energy produced in that time. The **marginal emissions metric** represents the rate at which emissions would change with a small adjustment to load within a specific geographic region. Calculating a customer's impact and avoiding double counting the actions of other customers also requires a **residual grid mix metric**, or the emissions factor of the grid once customer claims for RECs have been factored out.

Average and marginal emissions provide benefits to both customers and the grid, including:

- Helping customers understand where to target procurement decisions,
- Allowing smarter applications of demand-side technologies to help prevent dispatch of dirty power resources or curtailment of clean energy resources, and
- Helping customers shift electricity consumption in time and/or space to reduce emissions.

A growing number of customers also are adopting additional procurement strategies that require more granular data types:

- **24/7 clean energy matching to load** requires hourly generation data, hourly load data, and hourly purchasing instrument data.
- **Procuring clean energy in the most carbon-intensive places** requires marginal emissions factors to calculate what emissions were avoided on the margin by adding clean energy resources.

Incorporating minimum reporting metrics for all stakeholders across the West is a necessary first step toward regional emissions tracking. The California Independent System Operator (CAISO) and Southwest Power Pool (SPP) should include the metrics recommended by CEBA, WRA, and Gridworks as they provide data in their emerging day-ahead markets.

Customers need access to accurate, harmonized data to continue to drive decarbonization with their procurement decisions and substantiate their claims, especially as disclosure requirements increase. CAISO, SPP, states, and the regional renewable energy credit tracking system WREGIS should consult customers on use cases and methodologies for calculating average, marginal, and residual mix metrics, to meet the needs of evolving corporate procurement strategies that require more granular data.