# Greenhouse Gas & Clean Energy Accounting Methodology Catalog

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## BACKGROUND & STUDY PARTNERS

As clean energy and greenhouse gas (GHG) emissions policies expand beyond traditional renewable portfolio standards in the Western US, and the region looks to regional market coordination to meet clean energy goals, differences in these policies present challenges with consistency, accuracy, assignment of responsibility and costs. The contributors to this whitepaper seek to collate a catalog of GHG and clean energy accounting methodologies in use across the Western U.S. and identify differences between programs that may impact a state or utility's ability to meet its objectives.[1] This paper is intended to be a centralized resource and educational tool for regulators, policy makers, and other parties shaping the clean energy landscape.

This catalog was developed through interviews with participating members as well as other research on existing policies.

**WESTERN ENERGY SUPPLY & TRANSMISSION (WEST) ASSOCIATES**

- **Arizona Electric Power Cooperative**
- Arizona Public Service
- **Basin Electric Power Cooperative**
- **Montana-Dakota Utilities**
- **NV Energy**
- **PacifiCorp**
- **Platte River Power Authority**
- **Portland General Electric**
- Public Service Company of New Mexico
- **Salt River Project**
- **Tucson Electric Power**

**NON-WEST PARTICIPANTS**

- **Avista Corporation**
- **Eugene Water & Electric Board**
- **Public Generating Pool**
- **Puget Sound Energy**
- **Sacramento Municipal Utility District**
- **Tacoma Power**
- **Xcel Energy**

*Entities indicated in **bold** were interviewed by Brattle to inform the study*

## CATALOG OF PROGRAMS

Across the 15 utilities surveyed in this study, Brattle documented at least 56 distinct GHG and clean energy reporting or compliance regimes, categorized as follows:

### 13 RENEWABLE PORTFOLIO STANDARDS + 9 CLEAN ENERGY SUPPLY TARGETS

- Primarily demonstrated through renewable energy certificates (RECs)
- Include planning demonstrations and after-the-fact reporting of actual

### 10 MANDATORY GHG EMISSIONS REPORTING AND REDUCTION PROGRAMS

- Reporting of GHG emissions
- Some programs impose GHG emissions limits or "caps" on the electric sector enforced through carbon trading programs or via directly enforced limits

### 9 CUSTOMER ENERGY MIX AND GHG INTENSITY DISCLOSURE PROGRAMS

- Disclosure of owned and upstream resource mix reflected in fuel deliveries to end-use consumers
- Most programs include reporting of a service area GHG emissions rate

### 18 VOLUNTARY UTILITY AND END-USE CONSUMER GHG REPORTING AND COMMITMENTS

- Voluntary customer-funded or utility-funded initiatives or procurement intended to reduce GHG emissions or achieve other sustainability goals
- Reporting of metrics to consumers, investors, and the public for their sustainability targets

[1] Entities have been coordinating on GHG accounting issues for the last few years, including via the *WIRED GHG Accounting Working Group Report* prepared by the Center for the New Energy Economy at Colorado State University, November 2020.

## IDENTIFIED THEMES

The study identified 8 common themes across its utility interviews while developing the catalog:

### THEME 1: DUE TO THE VARIETY OF STATE POLICIES AND VOLUNTARY PROTOCOLS, THERE IS NO COMMON, FIT-FOR-PURPOSE GHG EMISSIONS ACCOUNTING METHODOLOGY AND DATA TRACKING SYSTEM FOR THE WEST

- Differences across the 56 distinct programs range from minor issues of accuracy, to considerable differences in program objectives, to material unintended inconsistencies such as:
  - Potentially substantial differences in outcomes in terms of resource mix, resource dispatch, deemed GHG emissions obligations, and customer cost
  - Impacted ability to buy and sell energy across state borders and between companies to meet policy objectives

### THEME 2: WHEN ACCURATE GHG EMISSIONS DATA ARE NOT AVAILABLE, A VARIETY OF ACCOUNTING PRACTICES ARE USED TO APPROXIMATE SCOPE 2 AND SCOPE 3 EMISSIONS

- Utilities are able accurately report their own Scope 1 emissions, but must estimate Scope 2 and 3 emissions based on contract data, market intsruments, regulated emission rates, and/or regional estimated rates

### THEME 3: THE VARIETY OF ACCOUNTING PRACTICES AND DATA SOURCES IN USE ACROSS THE WEST CAN LEAD TO INCONSISTENCIES OR DIFFERENCES IN ESTIMATED GHG EMISSIONS

- Artificial inflation of certain estimated GHG emissions obligations
- Inaccurate removal of some GHG emissions from consideration
- Assigning GHG emission obligations to the wrong customers
- Customer costs that may not correlate to emissions reductions
- Ongoing efforts to expand organized power markets may offer more opportunities for coordination

### THEME 4: JURISDICTIONAL POLICY FRAMEWORKS FOR GHG ACCOUNTING ARE NOT CONSISTENT WITH THE PHYSICAL FLOW OF ELECTRICITY ACROSS BROAD GEOGRAPHIES, ELECTRIC SYSTEM OPERATIONAL CONSTRAINTS, AND CURRENT MARKET STRUCTURES

- More sophisticated clean energy policies and enforcement mechanisms may need to be developed
- Wholesale energy markets may need to evolve to capture states' and utilities' GHG emissions goals across a regionally interconnected system

### THEME 5: MORE ACCURATE EMISSIONS RATES ASSOCIATED WITH "UNSPECIFIED" AND WHOLESALE MARKET PURCHASES CAN ENHANCE TRADE AND FULL PARTICIPATION IN REGIONAL MARKETS

- Inaccurate or imprecise emissions rates for market purchases can impose excess GHG obligations and associated costs on utilities and customers
- Develoment of more refined and dynamic estimates could reduce the potential for such outcomes and may incentivize fuller participation in regional organized markets

### THEME 6: WITH THE INCREASE IN FINANCIALLY ENFORCEABLE MANDATES, GHG ACCOUNTING PRACTICES HAVE THE POTENTIAL TO INTRODUCE RISKS AND COSTS TO UTILITIES AND CONSUMERS

- Ensuring that GHG emissions data reports are meaningful and accurate will become increasingly important if the associated programs are to serve policy goals, manage costs, and produce equitable outcomes

### THEME 7: A UTILITY'S POSITION IN THE VALUE CHAIN CAN SUBSTANTIALLY IMPACT THE NATURE OF AVAILABLE DATA AND DATA SHARING NEEDS WITH CONTRACTUAL COUNTERPARTIES

### THEME 8: UTILITIES REPORT INCREASING DEMAND FOR TRANSPARENCY AND GRANULARITY IN GHG AND CLEAN ENERGY ACCOUNTING FROM COMPANY BOARDS, END-USE CONSUMERS, INDUSTRY ADVOCACY ORGANIZATIONS, AND LENDERS

- Increasingly accurate methods for tracking non-emitting power and residual GHG obligations may be needed
- Opportunities for increased regional collaboration via regional markets and across state borders may provide useful data and improve GHG accounting consistency across jurisdictions