
CAISO Market Surveillance Committee - Point of Regulation for Electricity



June 8, 2007

Electric Sector Proposal

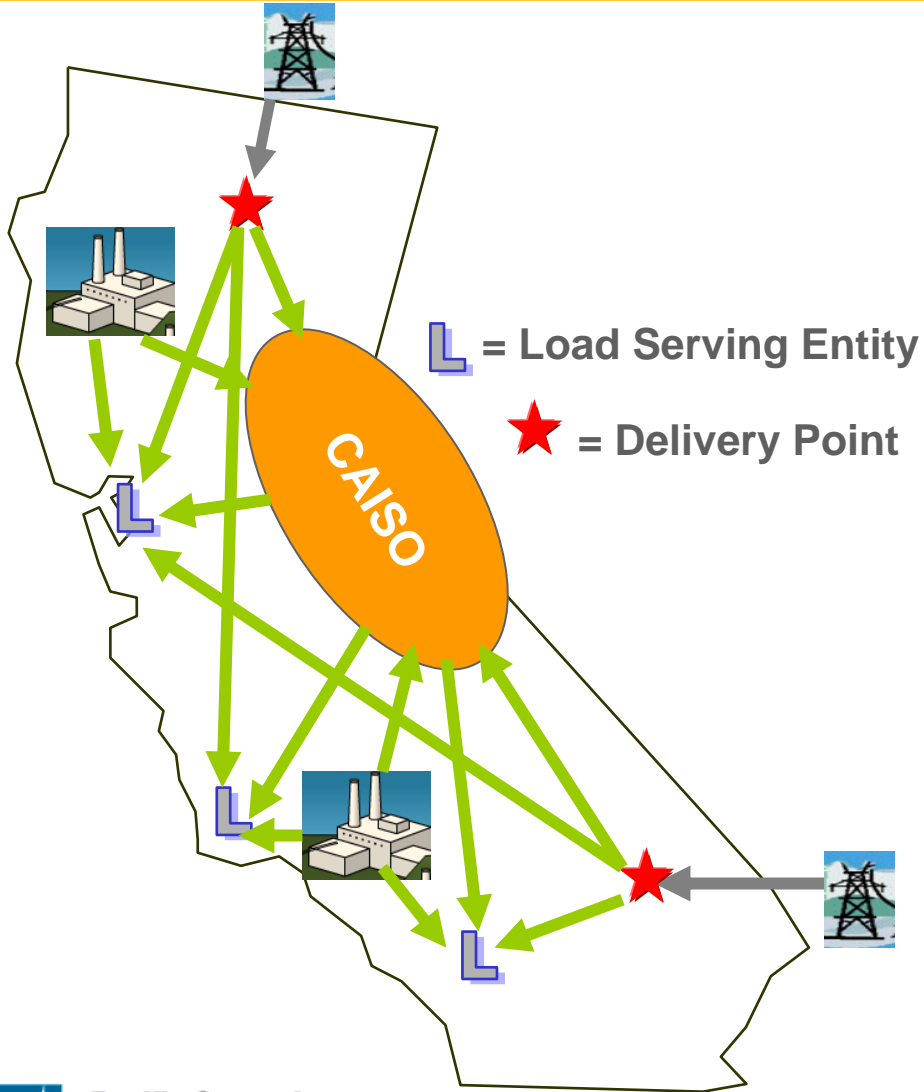
PG&E's Objectives

- Achieve sustainable emissions reductions
- Manage compliance costs on behalf of customers

Key Elements

- Allocation of Allowances to LSEs
- First Seller (Source, Importer) Point of Regulation
- Robust Market Design

Load Based Point of Regulation



Point of Regulation - LSEs

Compliance Responsibility

- In-state - LSEs
- Imports - LSEs

Emissions Assignment

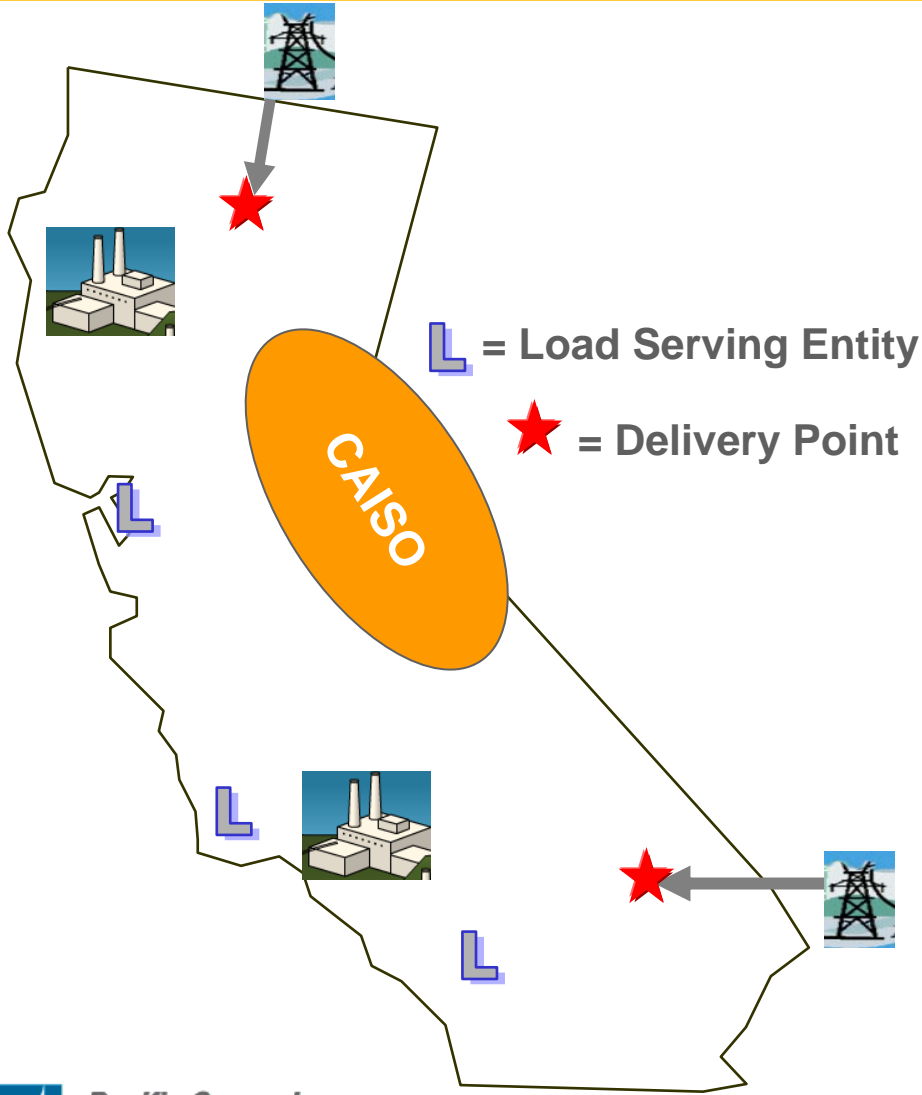
Direct Measurement

- LSE Generation (unless bid into pool)
- Unit-specific contracts (unless bid into pool)

Approximation

- LSE generation bid into pool
- Unit-specific generation bid into pool
- In-state generation in system sale contract
- Out-of-state generation in system sale contract or bid into pool

“First Seller” Point of Regulation



Point of regulation - First Seller

Compliance Responsibility

- In-state - Generators are first sellers
- Imports - Importers are first sellers

Emissions Assignment

Direct Measurement

- All in-state facilities
- Out-of-state unit-specific contracts

Approximation

- All other out-of-state contracts and purchases

First Seller Approach May Result in More Efficient Dispatch

	Commodity Price in Dispatch	CO2 Allowance Price in Dispatch	LSE Separately Purchases CO2 Allowances
First Seller	Included	Included	No
Load Based Cap	Included	Probably not Included	Yes

First Seller - *Including CO2 allowance reflects environmental cost in dispatch*

Load Based Cap

- *If not included, environmental cost not in dispatch*
- *If included, customers may pay twice for CO2 allowances*

First Seller: In-State Generation Compliance Steps

- Current Reporting Requirements:
 - CEMS data reported under Acid Rain program
 - Fuel use reported to CEC
- Incremental Proposed Reporting Requirements :
 - CARB Draft Reporting Methodology: All Generating Facilities > 1 MW will report
- Generators retire CO2 allowances to offset emissions based on direct measurement

First Seller: Imports Compliance Steps

- Current reporting:
 - E-tags track power transfers between Control Areas and list the power quantity and the owner of the power as it enters California
 - The CEC requires the control areas to report annual electricity flows on major transmission lines crossing the State line
- Incremental Steps:
 1. Importers will report imports to regulatory agency
 - Applies to both the CAISO control area and non-CAISO California Control areas
 - E-tags from Balancing Authorities will substantiate most imports
 - Exceptions may need to be substantiated on a case-by-case basis (e.g. remote generation in control area, cross-state control areas)
 2. Region-specific CO2 emissions rates assigned to all imports, excepting:
 - Importer owned generation, Unit specific contracts, or RPS eligible imports
 3. Importers retire allowances

Transaction Examples (Illustrative)

	First Seller Example	Load Based Example
Unit Specific (PG&E deal with Unit)	<ul style="list-style-type: none"> • Generator reports emissions to CARB and is responsible for emissions 	<ul style="list-style-type: none"> • Generator reports emissions to CARB • PG&E obtains emissions information • PG&E reports purchases to CARB and is responsible for emissions
In-State Product (PG&E deal with Generator/ Marketer for NP-15 Delivery)	<ul style="list-style-type: none"> • Generator/ Marketer as generator reports emissions to CARB and is responsible for emissions • If power is imported, Generator/ Marketer as importer reports to CARB and is responsible for emissions 	<ul style="list-style-type: none"> • PG&E reports purchases from Generator/ Marketer to CARB, not knowing if power comes from a specific unit, in-state generation, or imports • Emissions are approximated. • PG&E is responsible for approximated emissions
Out of State Product (PG&E deal with Marketer for COB Delivery)	<ul style="list-style-type: none"> • PG&E as importer reports to CARB and is responsible for emissions 	<ul style="list-style-type: none"> • PG&E as LSE reports to CARB and is responsible for emissions
CAISO Market (Marketer bids into CAISO Day ahead)	<ul style="list-style-type: none"> • Marketer as importer reports to CARB and is responsible for emissions 	<ul style="list-style-type: none"> • PG&E reports CAISO market purchases • CAISO reports generation and imports mix of CAISO market • Regulatory agency assigns emissions rate to mix & assigns responsibility based on LSE purchases, sales & owned generation. • PG&E is responsible for approximated emissions

Robust Market: Key Elements

- Apportionment proportional to sector
- Gradual phase-in of reductions
- Broad market for allowances/offsets, including early action
 - access to national/international markets for real and verifiable reductions
 - early protocol development critical given project lead times
 - CalEPA – general protocol
 - Link to offset project protocols in use elsewhere (EU, RGGI)