



GHG Cost Inputs and Fallback Tariff Clarification

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GHG Tariff Clarification (39.7.1.1.1.4)

- The CAISO needs to update tariff section 39.7.1.1.2
 - Only two of the three vendors currently identified in tariff publish a daily Greenhouse Gas price
 - Sometimes a vendor can delay its daily publication beyond the time-frame the CAISO requires for use in the market systems
 - The CAISO proposes tariff clarification to
 - eliminate vendor that does not publish a GHG price
 - average the two most recent GHG prices that are available

GHG Tariff Clarification (39.7.1.1.1.4)

39.7.1.1.1.4 Calculation of Greenhouse Gas Allowance Price

To calculate the Greenhouse Gas Allowance Price, the CAISO will use different greenhouse gas price indices for the Day-Ahead Market and the Real-Time Market and each greenhouse gas price index will be calculated on a daily basis using average at least two prices from two or more of the following vendors publications: the Intercontinental Exchange, CME Group, and ARGUS. If a greenhouse gas price from a vendor index is unavailable for any reason, the CAISO will use the most recent available greenhouse gas price from that vendor index. If for any reason the CAISO cannot calculate a Greenhouse Gas Allowance price, it will use the most recently calculated value. For the Day-Ahead Market, the CAISO will update the Greenhouse Gas Allowance Price index between 19:00 and by approximately 22:00 Pacific Time each day (T). The daily Greenhouse Gas Allowance Price will be used in the next day's Real-Time Market (T+1) and in the Day-Ahead Market for the following Trading Day (T+2) using prices for greenhouse gas allowances published on the day that is two (2) days prior to the applicable Trading Day, unless prices for greenhouse gas allowances are not published on that day, in which case the CAISO will use the most recently published prices for greenhouse gas allowances that are available. For the Real-Time Market, the CAISO will update greenhouse gas price indices between the hours of 19:00 and 22:00 Pacific Time using prices for greenhouse gas allowances published one (1) day prior to the applicable Trading Day, unless prices for greenhouse gas allowances are not published on that day, in which case the CAISO will use the most recently published prices for greenhouse gas allowances that are available. The CAISO will calculate each Greenhouse Gas Allowance Price during a year using prices for greenhouse gas allowances from that same year.

GHG Price Fallback Scenarios:

Both vendors available

- Both vendors publish prices by 21:00 on Nov 6:

Vendor	Vintage	Delivery Date	Trades	Volume-Weighted Average
A	2018	Dec 18	40	\$15.45
B	2018	Dec 18	10	\$15.47

- CAISO GHG Index = Average (\$15.45, \$15.47) = \$15.46
- CAISO GHG Index used for TD Nov 7 RTM and TD Nov 8 IFM

GHG Price Fallback Scenarios:

One vendor available

- Only one vendor publishes prices by 21:00 on Nov 6:

Vendor	Vintage	Delivery Date	Trades	Volume-Weighted Average
A	2018	Dec 18	40	\$15.45
B	2018	Dec 18		

- Last reported trade and VWA price from Vendor B was \$15.43 on Nov 5.
- CAISO GHG Index = Average (\$15.45, \$15.43) = \$15.44
- CAISO GHG Index used for TD Nov 7 RTM and TD Nov 8 IFM

GHG Price Fallback Scenarios:

Both vendors unavailable

- No vendor publishes prices by 21:00 on Nov 6:

Vendor	Vintage	Delivery Date	Trades	Volume-Weighted Average
A	2018	Dec 18		
B	2018	Dec 18		

- CAISO GHG Index will fallback to the last TD that had two vendor prices → Nov 5 GHG Index
- CAISO Nov 5 GHG Index used for TD Nov 7 RTM and TD Nov 8 IFM

Next Steps

- GHG Fallback changes in production for February 1, 2019.
- The CAISO will file the Tariff clarification by the end of November.
- Market Instruments BPM Attachment K updates, PRR by the end of November.