

MARKET SURVEILLANCE COMMITTEE

EDAM GHG Design: Resource Shuffling and the GHG Supply Stack

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ISO Public



California ISO

WESTERN ENERGY IMBALANCE MARKET

Deemed Supply from Importing BAAs

It is proposed that no supply from BAAs that are net importers in the GHG dispatch could be deemed exported to a GHG region.

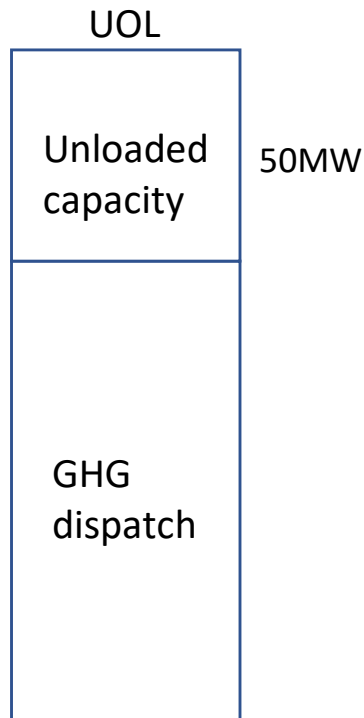
The capacity available to support exports to meet GHG region load would equal;

- Unloaded capacity in the GHG dispatch
- Less unloaded capacity that cannot be dispatched to meet GHG region load due to transmission constraints, ramp constraints and other operational factors;
- **Less unloaded capacity that does not submit a GHG bid;**
- **Less unloaded capacity located in regions that are net importers in the GHG dispatch.**

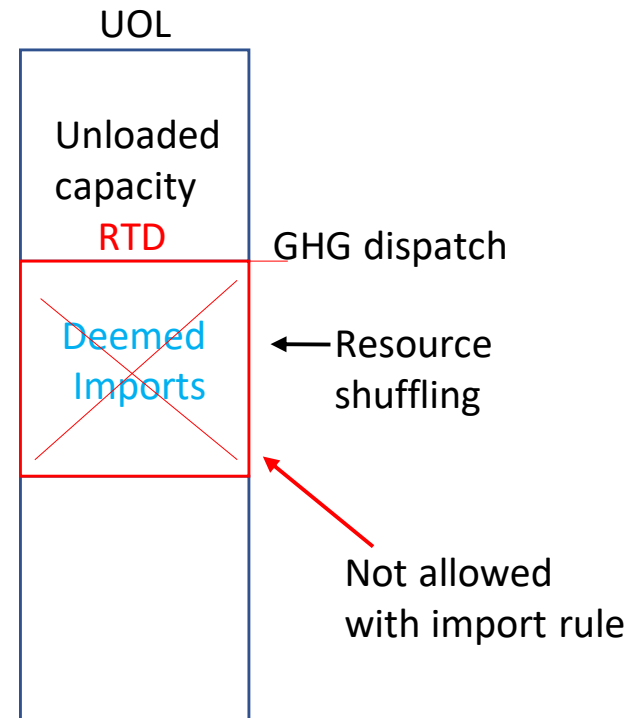
Deemed Supply from Importing BAAs

The proposed design will eliminate resource shuffling from resource located in BAAs that are net importers in the GHG dispatch.

GHG Dispatch



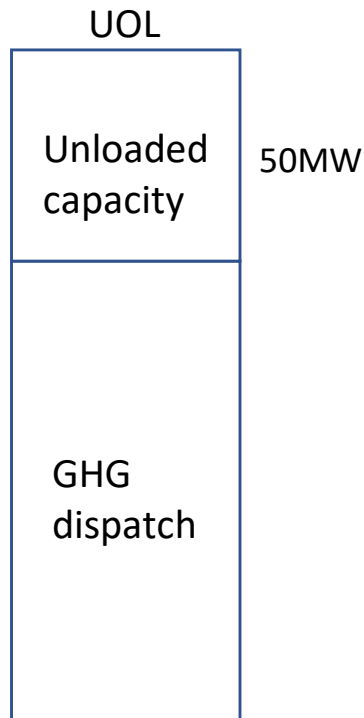
RTD Dispatch



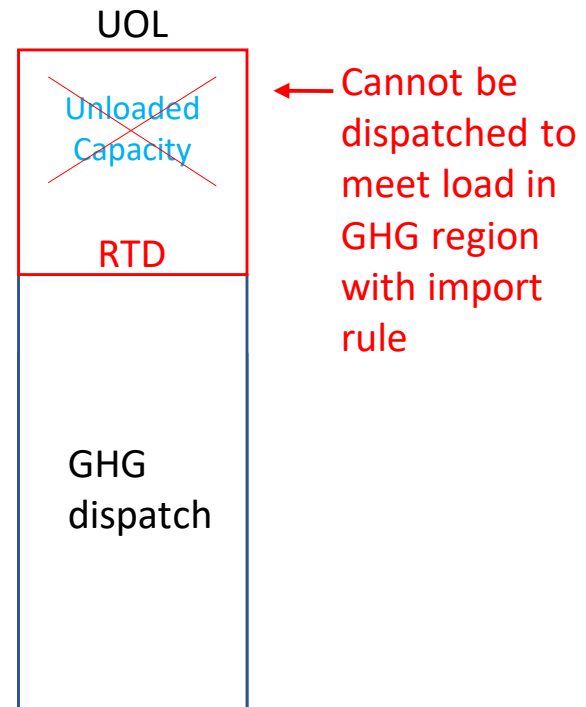
Deemed Supply from Importing BAAs

The proposed design will also eliminate supply from unloaded capacity on resources located in BAAs that are net importers in the GHG dispatch.

GHG Dispatch



RTD Dispatch



Supply with GHG offers

Because the proposed EDAM design will not only eliminate supply from resource shuffling but also eliminate supply from unloaded capacity in importing BAAs, we should consider the degree to which the design will reduce the supply available to GHG regions during tight market conditions.

- One analysis that could be undertaken would be to assess how much of the deemed GHG imports from importing regions was supported by output in excess of the base schedule.
- Another analysis would be to assess how much capacity in excess of base schedules, with GHG offers, is not deemed to CAISO during high load conditions, and therefore could have been dispatched to meet CAISO load. A complication in carrying out this analysis is accounting for the impact of transmission congestion.

The MSC does not have the data nor resources to carry out such an analysis, so we cannot independently assess these issues.

Supply with GHG offers

The Department of Market Monitoring observed in its 2021 Market Report that:

“After the secondary dispatch policy change in November 2018, which limited the capacity that could be deemed delivered, there were some price spikes that were not set by bids from emitting generators. Greenhouse gas supply can be exhausted, limiting the total transfer of energy imported to California through the WEIM and setting greenhouse gas prices that exceed the highest cleared bid. In 2020, the highest 15-minute price was \$708/MWh and the highest 5-minute price was \$970/MWh. This trend changed in 2021, when prices were higher on average but there were no extreme price spikes like in the previous year. The highest 15-minute and 5-minute prices in 2021 were \$255/MWh and \$267/MWh, respectively.”¹

While the \$255 price was not as high as in prior years, it considerably exceeds plausible GHG emission costs. These high GHG shadow prices could be a result of shadow price indeterminacies when multiple constraints are binding, could be a result of running out of supply with GHG offers, or other factors.

1. California ISO, Department of Market Monitoring, 2021 Annual Report on Market Issues and Performance, July 27, 2022.

Conclusions

I cannot speak to what is causing these high shadow prices, that is something for the Department of Market Monitoring and the CAISO to assess.

- The growth of the EIM over the past few years has likely increased the amount of supply with GHG offers.
- Conversely, the introduction of a GHG market in Washington may tighten the supply and demand balance for supply with GHG offers.
- The elimination of supply from unloaded resources in importing regions might reduce the available supply with GHG offers.
- Rules that include some contracted supply of LSEs within the GHG regions in the GHG dispatch, and thereby make it unavailable for deeming into the GHG regions, would also reduce the available GHG supply.

It would be good to understand the current supply demand balance for GHG offers and how each element of the proposed EDAM design would impact that balance.