

Comments on Greenhouse Gas Coordination 11-12-2024 Working Group Meeting

Department of Market Monitoring

November 26, 2024

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the ISO's *Greenhouse Gas Coordination Working Group* meeting held on November 12, 2024.¹ The presentation addressed two topics: the further specification and clarification of the accounting and reporting approach to allocating greenhouse gas (GHG) to entities not in priced GHG regulation areas, and the counterfactual used in the extended day-ahead market (EDAM) GHG reference pass. DMM offers brief comments on each of these topics below.

DMM continues to support the further development of the accounting and reporting approach as a near-term means of incorporating non-priced GHG policies into the EDAM framework. The accounting and reporting approach is a wholly out-of-market approach that leverages and enhances existing market processes and data to allocate GHG emissions to entities in areas with non-priced GHG policies. The primary benefit of this approach is that it is a non-market process that attributes GHG emissions after the market runs, and as such would likely have minimal direct market impacts. The November 12 working group discussion of the accounting and reporting approach focused on the data enhancements and granularity required to meet regulatory needs, and how the residual rate of emissions would be calculated. This topic addresses issues that do not directly affect market design, and DMM believes that stakeholders are best positioned to determine the data needed to satisfy their regulatory requirements.

The discussion of the GHG reference pass counterfactual included a review of the counterfactual currently approved for use in EDAM (CAISO method), a counterfactual previously proposed by stakeholders (Vistra et al method), and a new potential counterfactual (no GHG cost method).² As DMM has previously noted, use of a counterfactual that does not provide optimized schedules or transfers is likely to overstate the level of leakage attributable to GHG regulation.³ Using some form of optimized counterfactual in the GHG reference pass in EDAM will provide a more appropriate counterfactual for analyzing leakage or secondary dispatch, as it provides a baseline with optimized schedules. The CAISO method, or another alternative method that optimizes schedules and transfers, would be an improvement over approaches using non-optimized base schedules, as currently done in the Western Energy Imbalance Market (WEIM).

¹ Greenhouse Gas Coordination Working Group meeting, November 12, 2024:

<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Greenhouse-gas-coordination-working-group>

² The ISO refers to the currently approved EDAM method as the "CAISO method".

³ *Comments on Greenhouse Gas Coordination 5-29-2024 Working Group*, Department of Market Monitoring, June 12, 2024: <https://www.caiso.com/documents/dmm-comments-on-greenhouse-gas-coordination-may-29-2024-working-group-jun-12-2024.pdf>; *Comments on Greenhouse Gas Coordination 7-29-2024 Working Group*, Department of Market Monitoring, August 12, 2024: <https://www.caiso.com/documents/dmm-comments-on-greenhouse-gas-coordination-jul-29-2024-working-group-aug-12-2024.pdf>

The method proposed by Vistra et al optimizes within each BAA, but does not include optimized transfers between non-priced GHG regulation area BAAs. Therefore, the CAISO method, which includes optimal transfers between non-GHG balancing areas, is likely to produce results that have lower levels of secondary dispatch when compared to the Vistra et al method. DMM believes that a counterfactual that accounts for transfers may generally be more accurate than assuming no transfers in the counterfactual. However, use of the CAISO method may lead to higher GHG costs to GHG areas, because excess low-cost renewable energy in non-GHG balancing authority areas (BAAs) is likely to be dispatched to serve other non-GHG balancing areas in the reference pass, and would become un-attributable to priced GHG regulation areas. This may leave capacity from higher cost resources to be attributed to GHG areas.

The ISO also introduced a third possible counterfactual called the “no GHG cost method”. This method sets the baseline by calculating the optimal dispatch for the whole EDAM footprint, excluding GHG costs. This method differs from the CAISO and Vistra et al methods because it does not limit the optimized counterfactual dispatch to either the non-GHG regulation areas or individual non-GHG regulation balancing areas. One of the potential advantages of this approach is that the counterfactual takes into account the entire EDAM grid area and all potential transfers and resources, and better incorporates transmission constraints and the resulting congestion. Additionally, the use of the whole EDAM area in the reference pass results in a counterfactual with full economic displacement across all EDAM BAAs. This may reduce the likelihood of estimated secondary dispatch because the pool of attributable resources will be smaller.

DMM recognizes that the no GHG cost counterfactual is a new possible approach and is still under development. One critical piece missing from the presentation was a proposal for how the counterfactual would extract or control for the GHG costs in priced GHG regulation areas. For resources within priced GHG regulation areas, GHG costs are implicitly included in the energy bids rather than as a discrete component of the bids. This is in contrast to resources in non-priced GHG regulation areas, which include an explicit and discrete GHG bid cost adder. If the embedded GHG costs are not extracted from the priced GHG regulation area bids, the no GHG cost counterfactual would not provide an accurate measure of what the optimal solution would have been in absence of any GHG costs in the market footprint. DMM requests that the ISO propose one or more methods for how this could be achieved.

The no GHG cost counterfactual proposal also introduces a change to how the GHG costs would be allocated and priced. The no GHG cost counterfactual method optimizes across the entire EDAM footprint without consideration of explicit GHG costs. This counterfactual optimization will result in transfers from resources that have GHG emissions into priced GHG regulation areas. However, the GHG emissions cannot be priced marginally because explicit GHG costs are excluded from the counterfactual, the reference GHG attribution is not resource specific, and resources dispatched in the reference pass cannot be attributed in the integrated forward market (IFM). As a result, an alternative pricing mechanism for the emissions associated with the reference pass transfers must be used.

The ISO has proposed pricing the reference transfers using the average cost of the emissions associated with resources’ schedules that receive no GHG attribution in the IFM pass. The average price of GHG would be determined using these resources’ emissions characteristics registered in the ISO Master File. The emissions for energy attributed to the priced GHG regulation area in the IFM pass would continue to

be priced using the existing marginal pricing mechanism. The GHG revenue would be collected on the basis of the marginal price of GHG set in the IFM. Any difference between the GHG revenue for the import reference priced at the marginal GHG cost and the average emission cost associated with transfers would be uplifted to the regulation area load.

The introduction of a non-marginal pricing approach to GHG and an uplift payment into the settlement process for GHG costs would introduce additional complexities into the overall market design. As such, how the pricing mechanism, settlement, and uplift payments are determined should be specified in greater detail so a more complete analysis can be made.

In the presentation of the no GHG cost counterfactual method, the ISO stated that the settlement impacts to GHG regulation area load would be the lowest if the no GHG cost method were used. The ISO stated that this would occur because the reference imports into the GHG regulation areas are priced at the average cost rather than the marginal cost of GHG. This statement implicitly assumes that the average cost of emissions would always be less than the marginal cost. However, it may be possible to devise cases where the reference pass results in higher average emissions costs than the marginal cost. This may occur if the reference pass schedules a sufficiently large enough volume of high emitting resources that would become more expensive than other higher-cost, low emission resources—like hydro—when GHG costs are included in the IFM market run. DMM believes that the settlement impacts of the no GHG cost should be further explored through simulations and example cases.