March 7, 2022

EDAM working group #3 participants,

Below is my attempt to flesh out the remaining decision points for four of the key remaining scope areas in the unspecified/zonal approach. To best situate the unspecified/zonal approach for addition into the EDAM straw proposal, the working group will need to use much of our remaining time together to make decisions on how to proceed on these open areas. Subject to working group agreement, I propose to use this document to guide our discussion in the March 8 and 10 working group meetings.

This document builds off the presentation on the unspecified/zonal approach given on March 1. In that presentation, four key areas were identified as areas for further discussion and decision: 1) Source-specific pathways to the GHG zone, 2) Definition of the hurdle rate, 3) Compliance and reporting, 4) Settlement of GHG hurdle revenue. There is also one additional area which I would like to cover, time-dependent.

To give the working group a starting point, I have tried to highlight specific questions where a decision is needed and have provided potential responses. Naturally, these will be limited by my lack of knowledge of certain areas but we can fortunately leverage the expertise of the members of this working group, including CAISO staff where needed. As always, any mistakes or confusions in this document are my own and aren’t reflective of official CAISO policy or requirements.

Best,

Kevin Head

EDAM working group #3 facilitator

1. **Source-specific pathways to the GHG zone**
	1. Path 1: Define the GHG zone to include resources outside of physical state boundaries
		1. Eligibility criteria
			1. Contractual commitment to serve load inside GHG zone
				1. Decision needed: What types of contracts are acceptable?

All contracts

Pseudo-tie agreement

Other types of contracts

* + - * 1. Decision needed: Does the contract need to be backed by transmission?

No

Yes

* + - * 1. Decision needed: If pseudo-tie, is this an actual pseudo-tie agreement (i.e. considered part of the BAA, considered in power balance agreement) or is this a “GHG-only” pseudo-tie?
			1. Decision needed: If resource uses this path, would it preclude that same generation to be used in:
				1. RPS/CES programs?
				2. Qualified to serve native load for the RSE?
				3. Other?
		1. Decision needed: Would we allow partial commitments its resource’s output to serving the GHG zone or does the resource have to fully opt-in?

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|  | **Pros** | **Cons** |
| Full resource opt-in | * Likely easier to model because no need to “split” the resource
* If only a partial commitment, it might be difficult to understand which MWs serve the GHG zone directly versus those that are subject to the hurdle rate
 | * Some generators might not be willing to be committed to only serve GHG zone
 |
| Partial resource opt-in | * More flexible for participants because they don’t need to commit entire resource to serve GHG zone
 | * Unclear how frequently changes to percentage allocation could be made
* How would optimization decide which part of the resource’s output will serve GHG directly versus subject to hurdle rate
* If it leverages the JOU model, it would be subject to all of the JOU model constraints and timelines
 |

* + 1. Length of commitment/frequency of ability to switch out of zone
			1. Criteria needed to determine the required commitment length to use Path 1
				1. Decision needed: How long would a contract need to be to use Path 1?

1 month

1 quarter

1 year

Other

* + - * 1. Decision needed: What other criteria should be considered?

Potential for gaming

Business process constraints (e.g. Master File updates take at least 7 days)

* + - 1. Decision needed: Disqualifying criteria – What events would trigger the resource to no longer be able to use this path?
				1. End of contractual arrangement
				2. Changes of SCs/resource owner
				3. Transmission outages
				4. Others?
		1. Other issues
			1. Decision needed: Can an SC elect to only serve CA or only serve WA? If so, how would the optimization work?
				1. JOU model? If so, there would be JOU initiative timeline constraints and this would likely not be available by the time of EDAM
	1. Path 2: Once the GHG zone is defined, some imports may be treated on specified- or entity-specific basis
		1. Eligibility criteria
			1. Decision needed: Can this option be used by only non-emitting resources and asset controlling suppliers or can emitting resources use it as well?
			2. Decision needed: Do we need to ensure that resources isn’t committed to serve load elsewhere? If so, does this include RA? RPS/CES? RSE?
		2. Surplus non-emitting supply
			1. Decision needed: Proposed definition of surplus: “amount of extra capacity above the resource’s base schedule that is not otherwise committed to serve load outside of the GHG zone”. Is this acceptable?
			2. Decision needed: Because there is no base schedule in EDAM, is the use of the RSE optimization result acceptable to use as a counterfactual? If not, what should serve as the base schedule to define amount of extra capacity?
		3. Decision needed: How frequently could the SC make election?
			1. Hourly
			2. Daily
			3. Other frequency
	2. Combination of the two
		1. Decision needed: If both options are implemented, should resources only be allowed to use one option or can they use both at the same time?
		2. If both, what issues arise?
			1. Decision needed: Would the market prioritize path 1 commitments to serve GHG zone over path 2 because the path 1 commitments have longer term commitments?
			2. Decision needed: How could a resource use Path 2 if the “full opt-in” option is chosen?
1. **Definition of the hurdle rate**
	1. Initial assumption: Hurdle rate = Emissions rate (MTCO2e/MWh) \* Allowance price ($/MTCO2e)
		1. Emissions rate
			1. Decision needed: While the initial assumption is to use California’s default emissions rate of 0.428 MTCO2e/MWh- how will the approach handle different emissions rates? For example Washington state’s emission rate is 0.437 MTCO2e/MWh and what if there are GHG Regulation Areas that join with different emissions rates?
			2. Decision needed: How frequently would we expect this value to be reviewed? Is it reasonable to assume that the marginal resource will change over time?
		2. Allowance price
			1. Decision needed: With the inception of WA’s GHG program, there will be two allowance prices because the programs will be unlinked. Will we have:
				1. One hurdle rate based on the higher of the two?
				2. Average of the two allowance prices?
	2. Dynamic (i.e. time variable) versus static throughout the day
		1. Decision needed: Should the hurdle rate be dynamic (i.e. time variable) or static?

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| --- | --- | --- |
|  | **Pros** | **Cons** |
| Static | * Allows for more certainty to resources
 | * During hours of surplus of renewable output, a non-zero hurdle rate might limit transfers of non-emitting resources
 |
| Dynamic | * A zero/low hurdle rate might encourage more transfers of excess renewable energy and less curtailments by not artificially limiting transfers
 | * Might create “jumpiness” between hours of when hurdle rate changes
* Potential to create issues with market dispatches (e.g. if an receives a multi-hour commitment that spans hours when hurdle rate changes)
 |

* + 1. If hurdle rate is dynamic (i.e. time variable):
			1. Decision needed: Would the “excess solar” hours’ hurdle rate be set at zero? Some non-zero hurdle rate value?
			2. Decision needed: What would the metric be to determine what the “excess solar” hours are?
				1. Hour-by-hour assessment of marginal resource?
				2. Some other methodology?
			3. Decision needed: Would the “excess solar” hours’ have geographic granularity?
			4. Decision needed: What entity would be responsible for establishing the “excess solar” hours?
			5. Decision needed: Would the “excess solar” hours change:
				1. Daily?
				2. Seasonally?
				3. Other frequency?
1. **Compliance and reporting**
	1. Resources using the Source-Specific Pathway
		1. Change to e-Tags needed
			1. Clarification needed: What changes would be needed to e-Tags are needed and why?
			2. Clarification needed: If a change to tagging methodology is required, what is the timetable for these changes and can it be completed by Jan 2024? What happens if the rulemaking process issues an adverse opinion that eliminates the possibility to use the source-specific pathway?
		2. Validation requirements and identification of importer
			1. Clarification needed: What is different from the current model that would require changes here?
	2. Resources NOT using the Source-Specific Pathway
		1. Decision needed: Will the same entity bear the reporting and compliance obligation? Options:
			1. Reporting only entity
			2. Compliance only entity
			3. Reporting and compliance entity
		2. Decision needed: If the reporting entity is separate from the compliance obligation, which entity bears the *compliance* obligation once the hurdle rate is overcome?
			1. All non-GHG EDAM entities
			2. Only those EDAM entities that were net exporters in the hour
			3. The EDAM load-serving entities within the GHG zone
			4. CAISO
			5. Some third-party entity that is responsible for holding and retiring allowances
		3. Decision needed: If the reporting entity is separate from the compliance obligation, which entity bears the *reporting* obligation once the hurdle rate is overcome?
			1. All non-GHG EDAM entities
			2. Only those EDAM entities that were net exporters in the hour
			3. The EDAM load-serving entities within the GHG zone
			4. CAISO
			5. Some third-party entity that is responsible for holding and retiring allowances
		4. Decision needed: if compliance obligation is allocated to the non-GHG EDAM areas, would the allocation be based on:
			1. Pro-rata MW imported into GHG zone
			2. Carbon intensity of MW import into GHG zone
			3. Some other methodology
		5. Decision needed: should we provide the ability for an EDAM entity to not elect to serve the GHG zone?
			1. Decision needed: If so, how frequently could they make this election?
			2. Clarification needed: If so, does this mean that they would be blocked from actually physically exporting during the hour?
			3. Clarification needed: If NOT, does this violate FERC’s decision to require this election to be voluntary?
		6. Multiple GHG zones
			1. Decision needed: Because there will be two states with GHG programs w/in the GHG zone at the inception of EDAM, the model will have to determine which state is being served. How would the model make this determination?
				1. Physical proximity
				2. Pro-rata allocation by load w/in the GHG zone
				3. Other methodology
			2. Decision needed: Can an EDAM entity elect to serve just one of the states within the GHG zone?
				1. Decision needed: If so, how frequently could they make this election?
				2. Decision needed: If so, how would the model perform this allocation?
		7. Regulatory processes of CARB and WA Dept of Ecology
			1. Clarification needed: does California AB32 or WA’s recently passed law creating the cap-and-invest program support an approach that doesn’t identify the individual supplier?
			2. Clarification needed: if so, what is the timeline for a regulatory rulemaking process and can it be completed prior to Jan 2024?
			3. Clarification needed: if so, what happens if the rulemaking process results in an adverse decision and the changes cannot be made? Does this throw the entire model into jeopardy or is the reporting severable?
2. **Settlement of GHG hurdle revenue**
	1. Decision needed: Interaction with compliance and reporting - should the methodology used to determine the entity with the compliance obligation be the same to determine who will receive the GHG hurdle revenue?
	2. Clarification needed: Assuming that there is a connection between the compliance obligation and the distribution of the hurdle rate revenue, what mechanisms would be in place to ensure full cost recovery of cost of allowances?
3. **Other issues**
	1. Transactions between states within the GHG zones
		1. Decision needed: should transactions between states within the GHG zone (i.e. WA and CA) be allowed?
		2. Decision needed: If so, how would the supply resources be made whole for the transactions between states?
			1. They will not be made whole
			2. They will receive a share of the hurdle rate revenue
			3. They will be made whole using some other methodology