



Jan 20, 2022

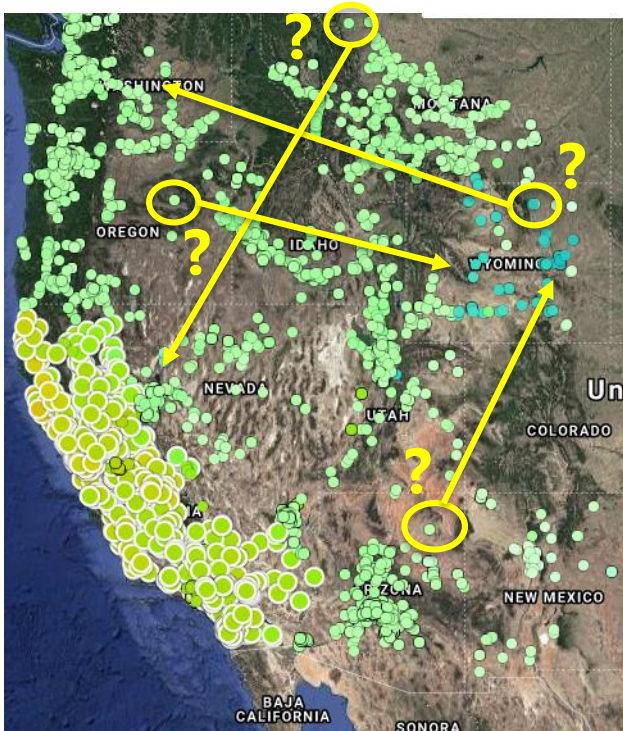
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Powerex Perspective on EDAM GHG Approach

Supply. Flexibility. Commitment.

Background

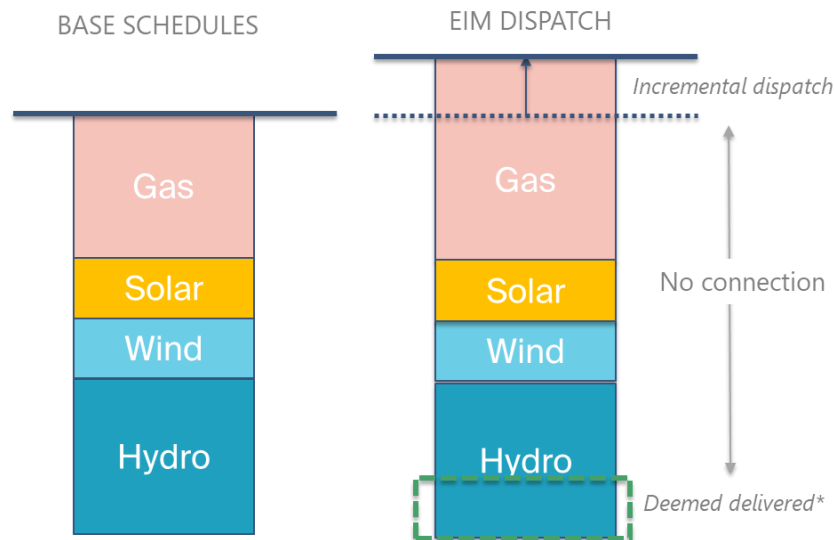
Organized market solution is a simultaneous optimization of all resources to meet all loads



- Very challenging to accurately identify which specific resources serve which specific loads
- EIM selectively “deems” cleanest external resources as serving California load
- Significant effort by CAISO staff and stakeholders to address accuracy challenges associated with a “resource specific” approach
- Despite enhancements, the underlying EIM algorithm still results in fundamental accuracy challenges

What Are The Key Challenges of the EIM Algorithm?

- At its core, the EIM algorithm seeks to minimize GHG compliance costs by preferentially selecting the cleanest external resources as “deemed” to serve CA load
- But, there is **no connection** between:
 - the resources that actually increase production in the EIM
 - the resources that are deemed delivered to California



* **Note:** the quantity available to be deemed delivered by the hydro resource would be limited to the amount of unloaded capacity above its base schedule.

What Are The Key Challenges of the EIM Algorithm?

- A **clean resource** that is base-scheduled to meet load outside of CA and does not increase its production in the EIM can be **deemed delivered** to CA
- An **emitting resource** can be incrementally dispatched in EIM to support imports to CA **without being deemed** (and therefore without its GHG costs being considered)
- Any resource in any location (with a GHG bid) **can be deemed to CA**, even if is **not deliverable to CA**
- Magnitude of consequences is limited by the size of EIM
 - However, the magnitude would be much greater if EIM algorithm was applied to EDAM

Expanding the EIM Approach Would Be Highly Problematic

- Understated GHG emissions and leakage
- Dispatching the wrong resources because the cost of GHG emissions are not accurately considered
 - Emitting resources dispatched instead of clean resources
 - External resources dispatched ahead of similar resources within the GHG compliance zone
- Incorrect assignment of GHG responsibility and reporting obligations
- Suppressed price signals, compensation and incentives for clean resources
 - Would also suppress overall market clearing prices for all non-EIM/EDAM imports into California

Conclusion

- Recognize that *perfectly* meeting all of the stated objectives is unlikely
 - EIM algorithm approach does not sufficiently meet all of the objectives and therefore should not be extended
 - A new EDAM GHG approach will be necessary to sufficiently achieve:
 - An acceptable level of accuracy for GHG attribution and reporting
 - Accurate dispatch and pricing, and appropriate compensation for clean resources
- Recognize that consequences under a regional day-ahead market are much greater than EIM
 - Larger volume of transactions
 - Growing number of jurisdictions adopting GHG policy
- Consider new approaches to meet GHG objectives
 - Don't treat imports as resource-specific unless accurate identification is achievable
 - Develop more robust framework for verifying “clean” import eligibility



Thank You

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