System market power mitigation discussion

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ISO made several changes to system market power mitigation proposal

- Revised trigger to be only based on EIM BAA marginal energy costs and proxy peaker prices
- Revised pivotal supplier test to also consider import offers as potentially pivotal supply
- Revised competitive LMP to be the greater of the second highest-priced EIM region's marginal energy cost or highest-priced cleared import on a constrained intertie

Today's discussion

- Discuss the system market power mitigation trigger
  - Some stakeholders are concerned that the trigger no longer includes the day-ahead bi-lateral index price
- Discuss the system market power mitigation competitive locational marginal price
  - Some stakeholders are concerned that the second-highest EIM price may not be competitive
  - Some stakeholders are concerned that the calculation does not fully capture scarcity premiums
- Discuss whether ISO market scarcity pricing improvements are a necessary pre-requisite to implementing system market power mitigation

Propose to trigger system market power mitigation process when conditions reasonably indicate that the ISO BAA is effectively import constrained and suppliers could potentially exercise market power

- ISO BAA in the highest cost EIM region (this does not include when all EIM BAAs have the same price), and
- ISO BAA marginal energy cost is greater than calculated internal and external proxy peaker prices
  - External proxy peaker price to include start-up costs along with other elements found in DEB

Removed the day-ahead bi-lateral trading hub prices the trigger

- Some stakeholders are concerned about using day-ahead bi-lateral trading hub prices
  - Bi-lateral hub could be in a constrained area and/or include expectation of unmitigated ISO day-ahead prices
  - May be greater than actual real-time operating costs including relevant cost drivers
  - Still have to fail pivotal supplier test before mitigation occurs
- Other stakeholders believe using the day-ahead bi-lateral trading hub prices is necessary
  - Day-ahead bi-lateral prices are the only prices available that incorporate relevant cost drivers
  - Imports may not offer supply if ISO mitigates its prices below prices outside the ISO
    - The proposal attempts to address this by using import offer prices in the competitive LMP

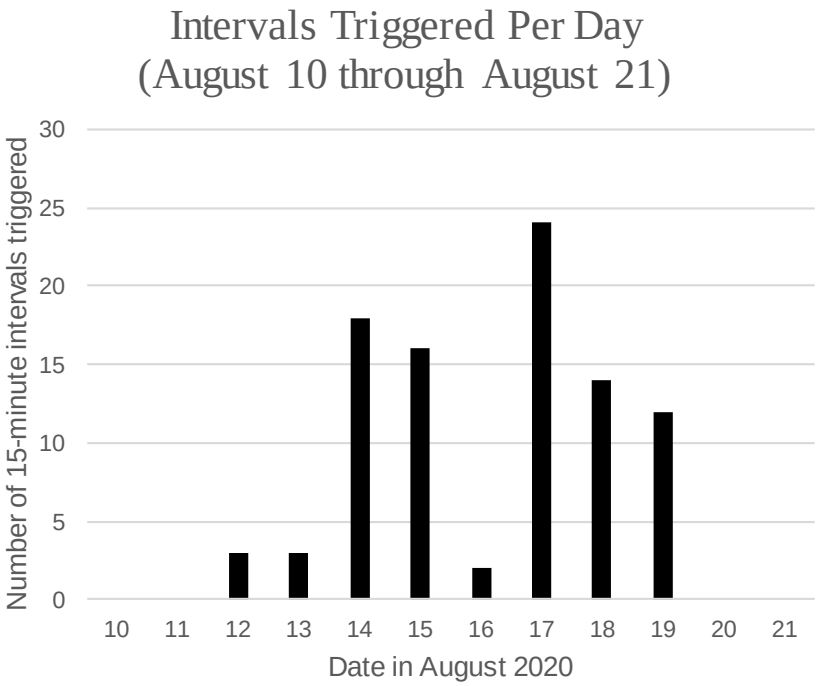
System market power mitigation trigger met in 231 fifteen-minute intervals in 2019

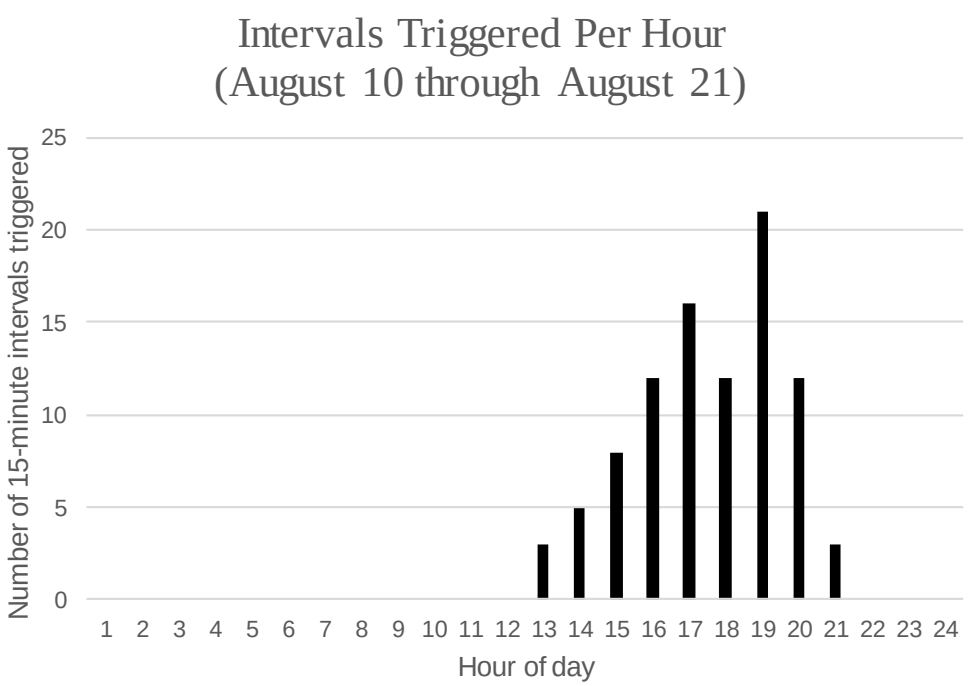
- Triggered in 231 fifteen-minute intervals (approximately 58 hours) out of 35,040 fifteen-minute intervals
- In 85 of these intervals, the ISO marginal energy cost is less than $100
- In 9 of these intervals, the ISO marginal energy cost is less than the shaped day-ahead bi-lateral hub prices
- In 36 of these intervals, higher priced BAAs failed upward flexible ramp sufficiency tests

System market power mitigation trigger met in 92 fifteen-minute intervals between August 10, 2020 and August 21, 2020

- Triggered in 92 fifteen-minute intervals (approximately 23 hours) out of 1,152 fifteen-minute intervals
- In 3 intervals, the ISO marginal energy cost is less than $100
- In 55 intervals, the ISO marginal energy cost is less than the shaped day-ahead bi-lateral hub prices
- In 42 intervals, higher priced BAAs failed upward flexible ramp sufficiency tests

System market power mitigation screen targeted most stressed days and hours during August heat storm

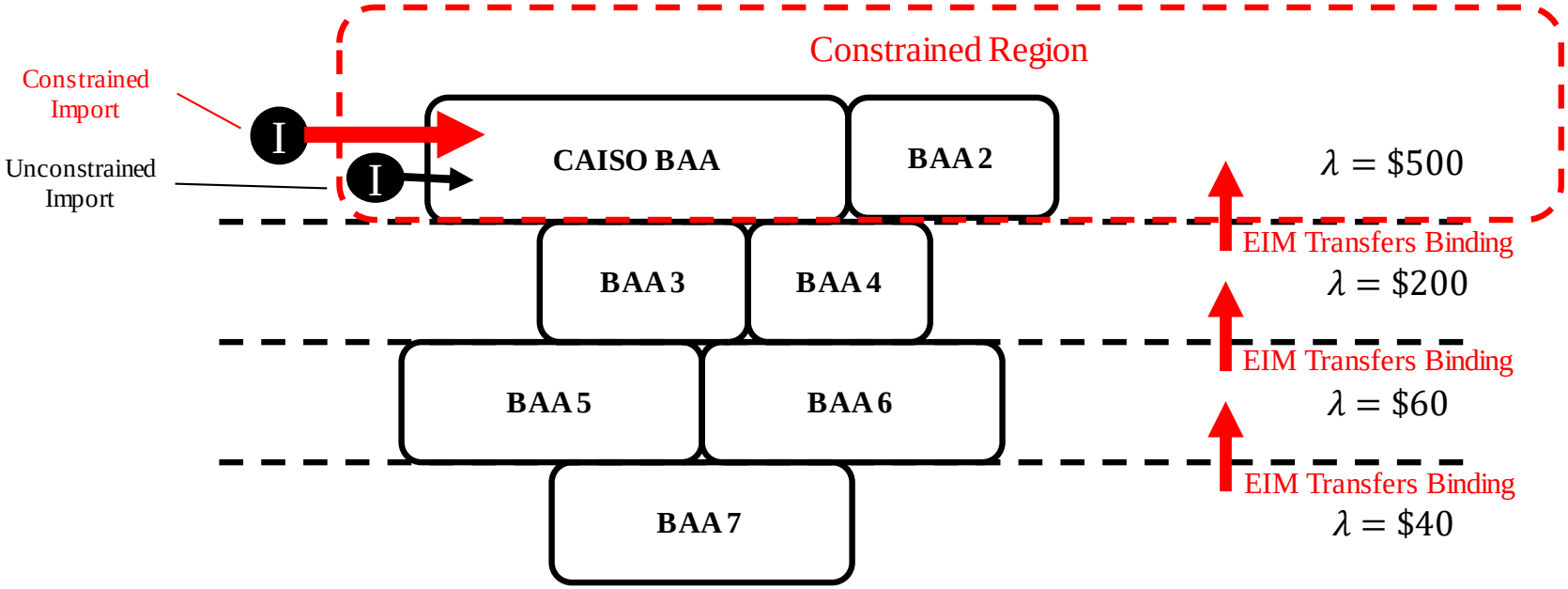




System-level competitive LMP will serve similar function as competitive LMP in local market power mitigation

- Ensure process does not mitigate resources beyond the amount needed to resolve market power in the constrained region
  - Avoids increasing net exports out of the constrained region due to over-mitigation
- System-level competitive LMP proposed to be calculated as the greater of the following:
  - The second highest balancing authority area marginal energy cost in the EIM
  - The highest import offer cleared on a constrained intertie in the corresponding HASP 15-minute interval
    - This offer may reflect other cost drivers other than fuel costs
    - Although, some stakeholders contend import offers may not reflect prevailing bi-lateral prices because they have no other opportunity to sell once they decide to sell to ISO

Bids on unconstrained interties can affect price in the constrained region and are therefore “inside” the constrained region



Are scarcity pricing improvements a necessary pre-requisite to implementing system market power mitigation?

- Stakeholders are concerned that when resource offers are mitigated due to system market power, the expected resulting ISO market clearing prices may be less than the going-rate for energy outside the ISO
  - Importers would not offer supply to the ISO
- ISO markets should not rely on suppliers exercising market power to effectuate scarcity premiums in market clearing prices
- One way to keep ISO prices competitive with the broader west without relying on suppliers exercising market power is to incorporate scarcity pricing improvements in the real-time market
- Proposed competitive LMP would include scarcity premiums to the extent that they are represented in cleared supply offers on constrained interties
  - This may not be a strong enough scarcity pricing provision
  - **Potential modification:** include the highest cleared import offer on *any* intertie from a *non-pivotal supplier* in the competitive LMP