EIM Entities Presentation on Congestion Rents for EDAM Design

Feb 11-12, 2020

Preamble

- The EIM Entities are a diverse group differently situated based upon geography, resource portfolios, and jurisdictional status, among other potential differentiating factors.
- Some EIM Entities may not have yet formulated individual positions on specific market design issues. Therefore, while this presentation represents a consensus view, it may not necessarily represent the ultimate position of any individual EIM Entity.
- Some EIM Entities may choose to offer their own individual contributions where appropriate, either in comments or throughout the stakeholder process.

Agenda

- Congestion Rent and Allocation Background
- Congestion Rent Allocation Objectives
- Potential Complexities
  1. Mismatching Transmission Buckets
  2. Transfers between two BAAs with mismatching transfer capability

Congestion Rents

Congestion Rent and Allocation Background

Congestion leads to LMP price separation between resources and loads

- Generator “behind” a transmission constraint generally receives a lower price than the price paid by load on other side of the constraint
- Congestion can occur from BA to BA and also intra-BA between generation and load

Congestion rent resulting from this price differential is collected by the Market Operator and typically allocated to the Transmission Owner and/or CRR holder

Congestion rent allocation is an important mechanism to provide revenue to the relevant transmission rights holder

Congestion Rent and Allocation Background

Existing congestion allocation approach in CAISO markets:

- CAISO typically uses congestion credits and CRRs to allocate congestion revenues within the CAISO BAA

Existing congestion allocation approach in EIM:

- *Congestion within an EIM BAA:*
  - CAISO allocates total BAA congestion rents to the relevant EIM Entity
  - EIM Entity typically uses OATT provisions to sub-allocate congestion rents to transmission customers and/or measured demand
- *EIM Transfers:*
  - Typically congestion rents resulting from EIM transfers are allocated **50/50** between BAAs at an EIM intertie (but exceptions apply, particular with CAISO Interties)

Congestion Rent Allocation Principles

EDAM market design must include mechanisms to fairly allocate congestion rents that arise from EDAM transactions across the broader footprint

- Including Intra-BAA congestion
- Including EDAM transfers between BAA

Approach should result in a fair allocation of congestion rents to the entities that contribute transmission to EDAM

- Allow for allocation to the transmission rights holder providing Bucket 1 or 2
- Allow for allocation to the TSP/BA for incremental sales of Bucket 3

Achieving a fair allocation is necessary to provide incentive to make transmission available

- Remainder of the discussion focused on congestion from EDAM transfers

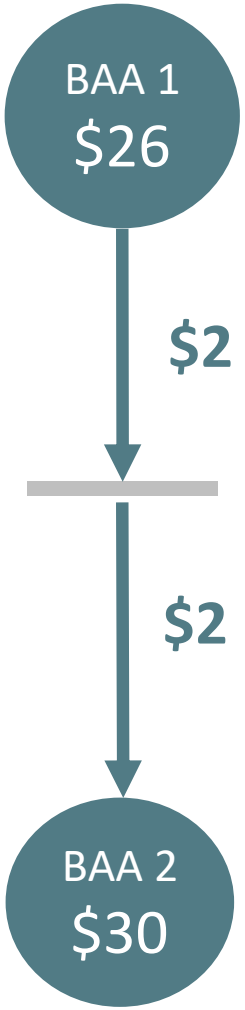
Congestion Rents - Potential Complexities

1. Transfers between two BAAs using mismatching transmission buckets

2. Transfers between two BAAs with mismatching transfer capability

Congestion Rent Allocation Potential Complexities

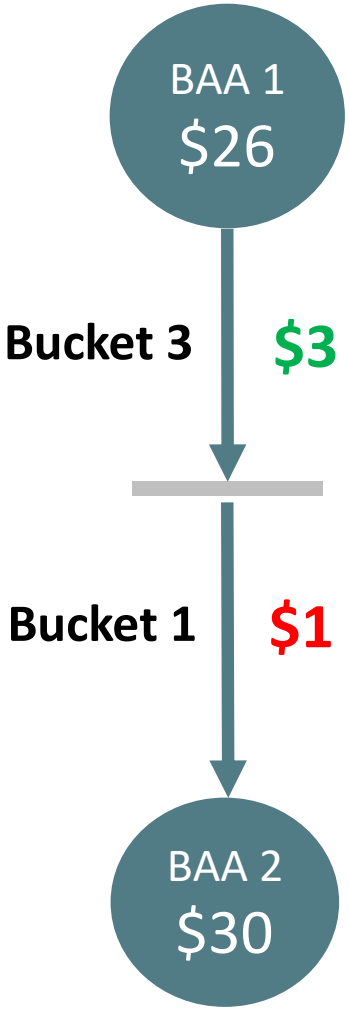
1. Mismatching Transmission Buckets



- Congestion rents resulting from EIM transfers are typically allocated **50/50**
  - EDAM could use a similar approach
- Example: $4 in total value on transmission path from BAA 1 to BAA 2 (no losses)
- Congestion rent is $4, and each side of intertie receives $2

Congestion Rent Allocation Potential Complexities

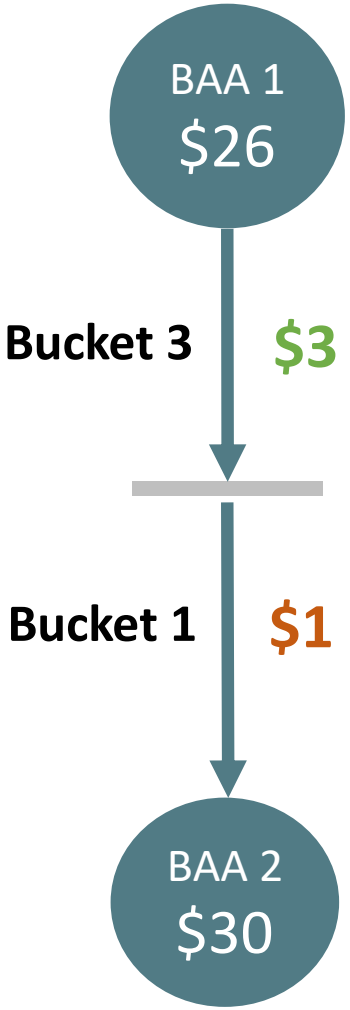
1. Mismatching Transmission Buckets



- Congestion rent will be impacted if a hurdle rate is used on one side of the intertie
- Assume BAA 1 is using Bucket 3 (with $3 hurdle rate) and BAA 2 is using Bucket 1
- $4 value from BAA 1 to BAA 2 is now allocated differently:
  - The first $3 is necessary to satisfy the hurdle rate and paid to BAA1
  - Only $1 congestion rent remains for allocation to BAA 2

Congestion Rent Allocation Potential Complexities

1. Mismatching Transmission Buckets



<u>One Potential Solution to Mismatched Buckets:</u>

a. Bucket 3 receives the "first" $3 of value to satisfy hurdle rate
b. Bucket 1 then receives any congestion rent, up to $3
c. Any additional congestion rent beyond $3 is split 50/50

- This approach would likely require a monthly true-up to address systemic shortfalls in payments to Bucket 1 Entity

<u>Or</u>:

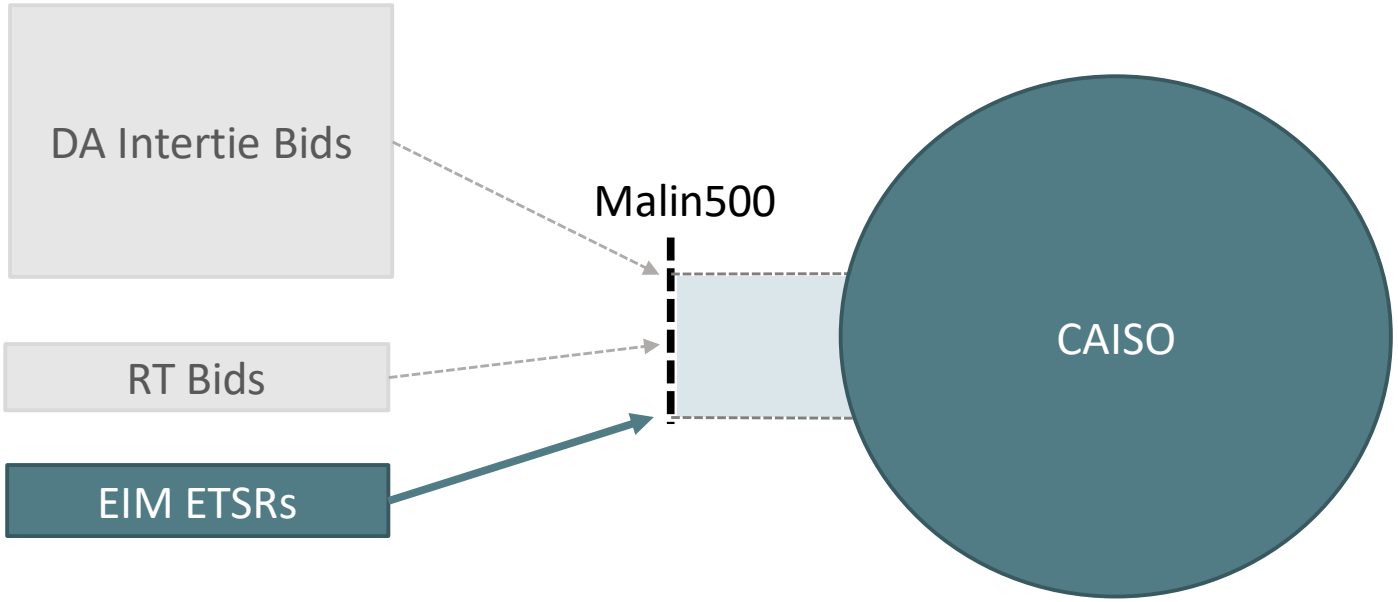
- Entity providing Bucket 3 could waive the hurdle rate for transmission on mismatched path (and instead receive 50% of congestion rents)

Congestion Rents Allocation Potential Complexities

2. Mismatching Transfer Capability

Some EIM interties have mismatching transfer capability

- Mismatch typically occurs with ETSRs connecting to CAISO
- CAISO interties are used for multiple purposes (CAISO DA, CAISO RT **and** EIM ETSRs)

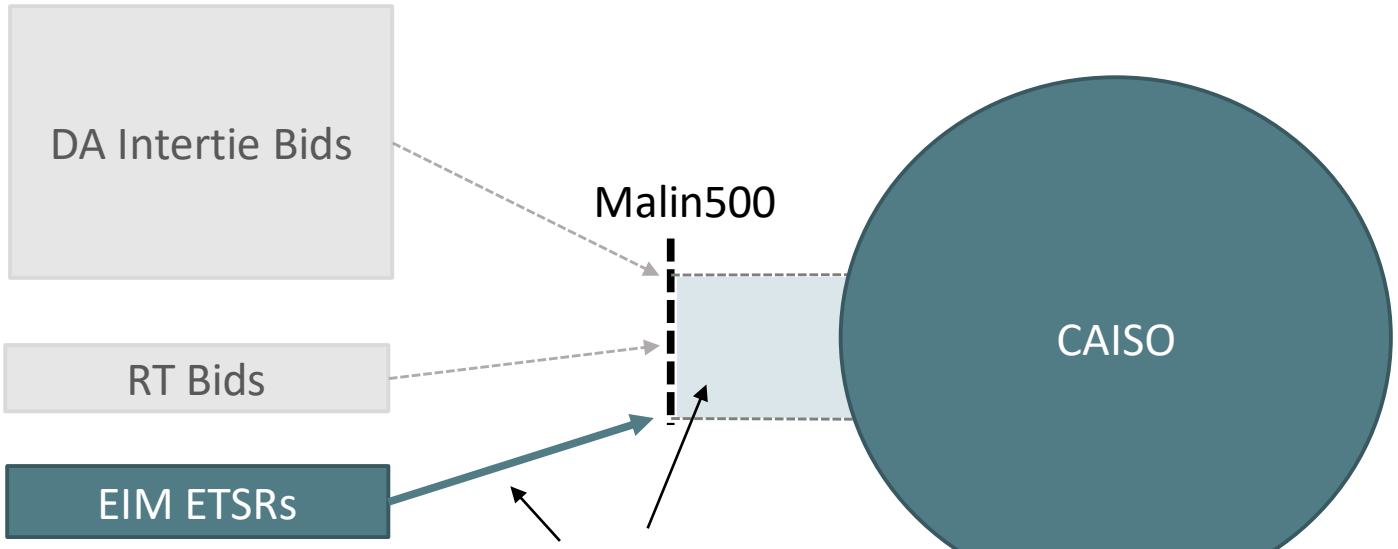


Congestion Rents Allocation Potential Complexities

2. Mismatching Transfer Capability

EIM currently uses an “all or nothing” allocation approach

- **100% congestion value** is allocated to whichever side fills first
- **No congestion value** is provided to other side of the path



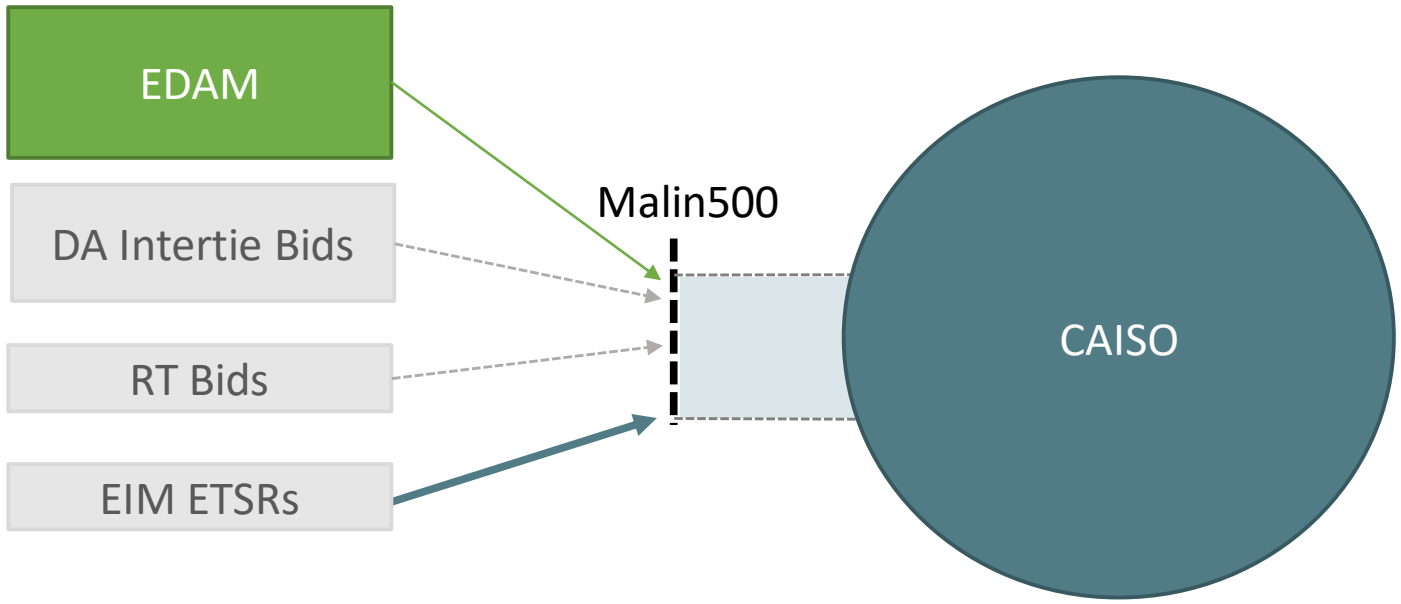
0% *or* ***100%*** *depending on which side fills first*

Congestion Rents Allocation Potential Complexities

2. Mismatching Transfer Capability

EDAM transfer capability likely **much greater** than EIM

- Design could determine allocation of congestion value for majority of flows on major interties such as COB and NOB



Congestion Rents Allocation Potential Complexities

2. Mismatching Transfer Capability

- Extending “all or nothing” approach can result in **unfair** and **systemic** windfalls for owners on one side of the transfer path

- EDAM congestion rents must be fairly allocated to entities that provide transmission to enable EDAM transfers

- Should seek durable and predictable outcomes to attract maximum transmission to EDAM

Congestion Rents Allocation Potential Complexities

2. Mismatching Transfer Capability

One possible solution is to allow transmission to be provided in exchange for 50% CR allocation on the “full” path:

- Entity A provides **100 MW** of upstream transmission from EDAM BAA to Malin500
- Entity A receives **50 MW** “full path” CR allocation (including across Malin500 intertie constraint)
- Eliminates risk of systemic payment to one “side” of path