



Extended Day-Ahead Market Working Group 2: *Transmission Commitment and Congestion Rent Allocation*

Facilitator: Deb Le Vine

Scribe: Emily Hughes

February 22, 2022

Meeting Cadence: Tuesdays and Thursdays, 9 – 11 a.m.

Reminders:

- These collaborative working groups are intended to foster open dialogue and sharing of ideas and perspectives
- Please raise your hand if you have a question or comment at any time during the meeting and the facilitator will call on you
 - Please start by stating your name and affiliation
- Meetings are recorded and video files posted on corresponding working group webpages
- Stakeholders are welcome to present perspectives at these meetings
 - Please submit a request to present using the link located on the EDAM Resources slide at the end of this presentation

Agenda:

Time:	Topic:	Presenter:
9:00 - 9:05	Welcome/introductions	Elizandra Casillas
9:05 - 9:10	Kick-off meeting	Deb Le Vine
9:10 – 10:00	EDAM - Transfer Transmission Rights	Milos Bosanac
10:00 -10:55	Real Time Market Dispatch	James Lynn
10:55 - 11:00	Upcoming topics	Deb Le Vine



EDAM – Transfer Transmission Rights

Working Group 2
2.22.2022

Role of transmission across EDAM Entity interfaces

- Through the extension of the day ahead market, generation dispatch is optimized to derive benefits.
- Absent transfers between EDAM BAAs, generation internal to the BAA is optimized to derive benefits.
- Transmission availability for optimization between EDAM BAA interfaces allows for further benefits of generation optimization and sharing across the BAAs through EDAM transfers.
- The EDAM should look to maximize transmission availability to increase EDAM transfers and derive mutual benefits.

Concept of Transmission Buckets

Bucket 1

- Firm, Conditional Firm, PTP and NITS (otherwise highly reliable)
- Supports delivery of resource sufficiency across EDAM BAA interfaces
- No usage rate, subject to congestion rents

Bucket 2

- Firm, Conditional Firm, PTP (otherwise highly reliable)
- Voluntarily made available to market
- No usage rate, subject to congestion rents

Bucket 3

- Unsold, unreserved, Firm, Conditional Firm, or “otherwise highly reliable” ATC
- Made available by Transmission Provider
- Subject to OATT usage rate.

Maximizing Transmission Availability to Derive Benefits

- Bucket 1 provides a limited amount of transmission to support optimization across EDAM BAAs.
 - Example: EDAM Entity X may have a 5000 MW RSE obligation, but only 200 MW of the obligation is met with imports that source or wheel through adjacent EDAM BAAs. Bucket 1 transmission would only consist of 200 MW of transmission to support EDAM transfers.
- Buckets 2 and 3 provide additional transmission across interfaces of EDAM BAAs to support robust EDAM transfers to derive further benefits across the EDAM footprint.
 - Bucket 2 consists of transmission rights voluntarily made available to support EDAM transfers.
 - Bucket 3 consists of unsold ATC across EDAM BAA interfaces to support EDAM transfers.



California ISO

Bucket 2 Transmission

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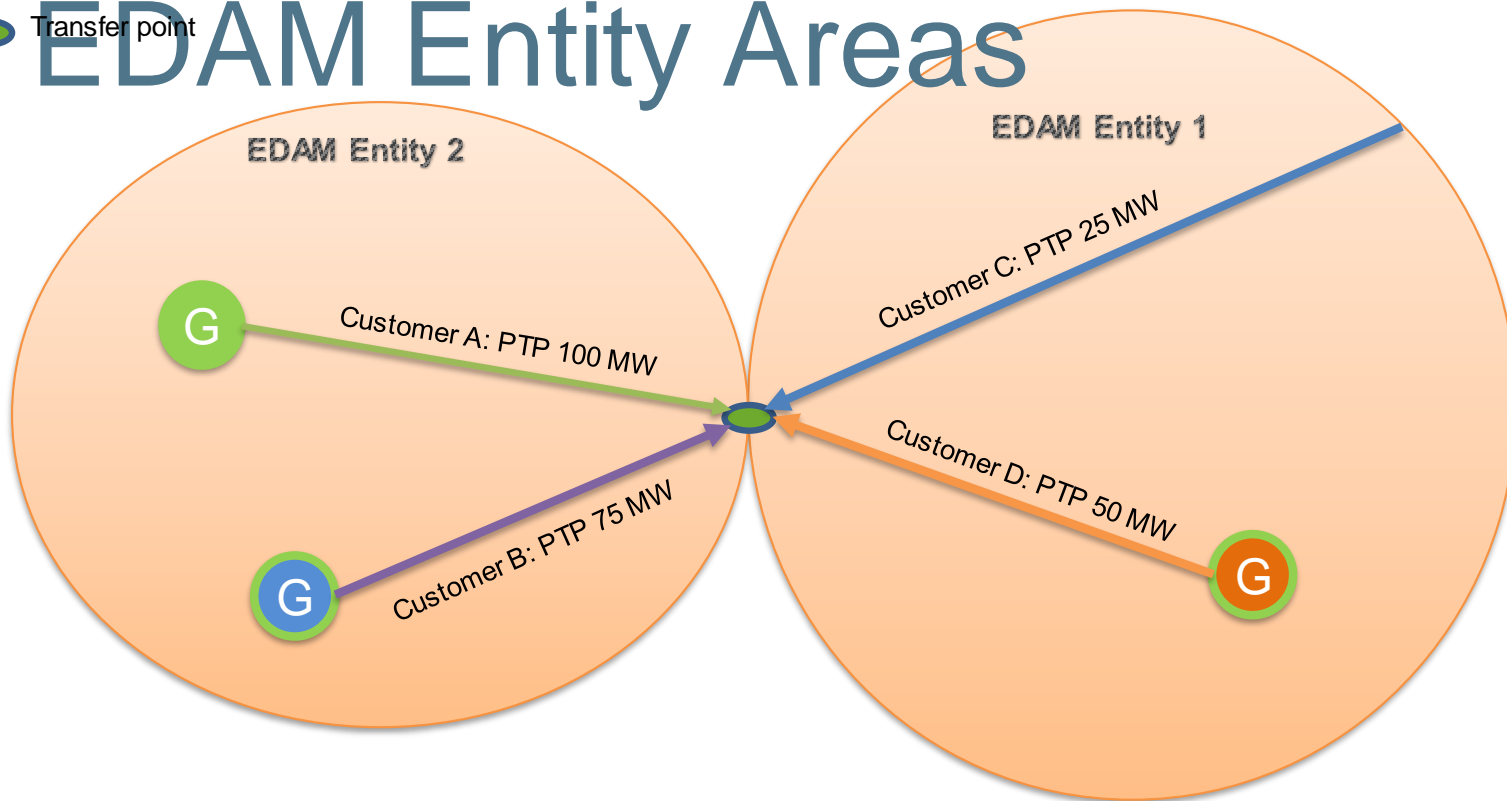
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Bucket 2 Transmission Characteristics

- Consists of transmission rights, at interfaces between EDAM BAAs, made available to market to facilitate EDAM transfers.
 - Can be OATT rights or legacy agreements.
- Consists of firm or conditional firm PTP transmission rights.
 - Long-term and short term transmission rights.
- Bucket 2 transmission is made available on a voluntary basis to support EDAM transfers.
- Bucket 2 transmission is not further compensated at a usage rate, but is entitled to congestion rent allocation.

Bucket 2 – Transfers Between

EDAM Entity Areas



Bucket 2: EDAM Entity 2 to Entity 1

- Total: 175 MW
 - Customer A: 100 MW
 - Customer B: 75 MW

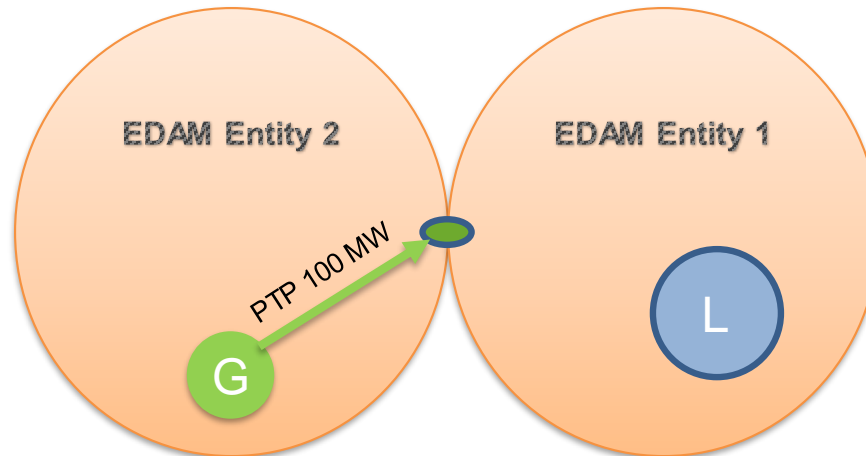
Bucket 2: EDAM Entity 1 to Entity 2

- Total: 75 MW
 - Customer C: 25 MW
 - Customer D: 50 MW

Electing to Make Transmission Available

- Transmission customers can elect to make transmission rights available to the market for optimization.
 - Election made in advance of DA market, identifying transmission rights to or from EDAM area interchange.
 - Election communicated to market that transmission is available for DA market optimization.
- Once transmission customer elects to make transmission available, transmission rights used in EDAM may not be exercised in real-time.
 - Mitigates risk of redispatch risk for EDAM Entity and supports dependability of EDAM transfers.

Example – Making Transmission Available

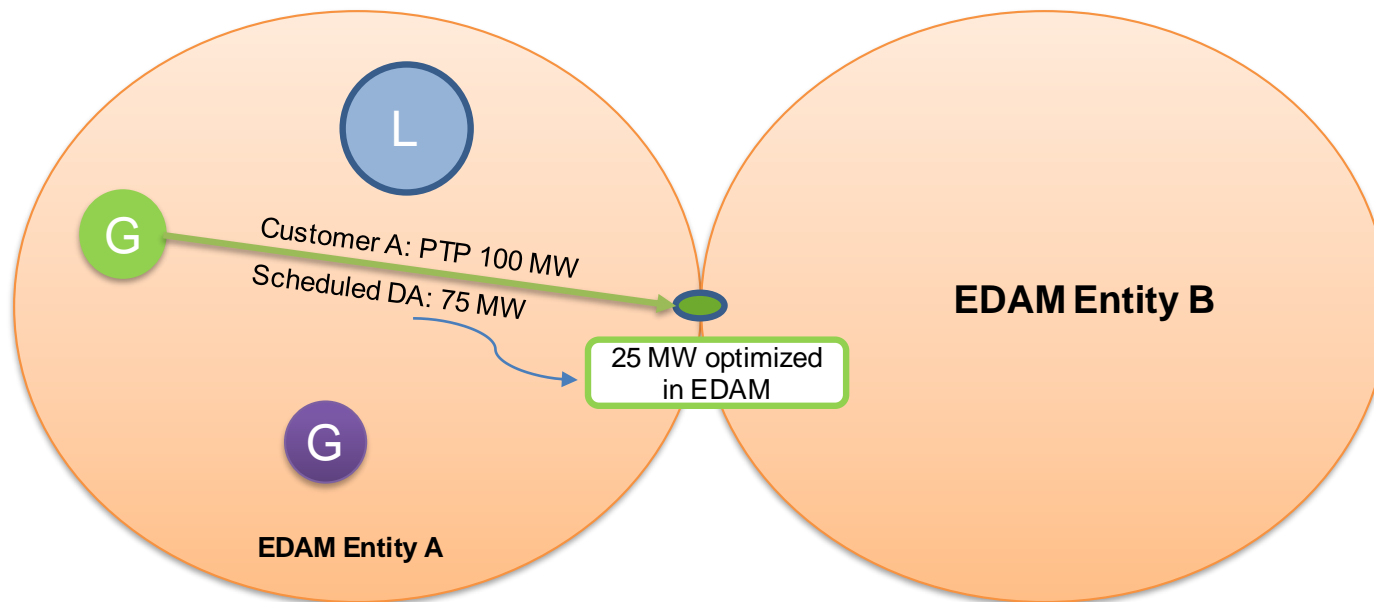


- Transmission Customer makes 100 MW PTP reservation available into interface between Entity 2 and Entity 1 for DA market optimization.
- Once election is made to make transmission available for DA market optimization, PTP reservation cannot be utilized in real-time.
- Market optimizes the transmission across the interfaces to support EDAM transfers.

Unscheduled Transmission Rights

- Transmission customers may elect not to make transmission rights available to EDAM for optimization.
- Traditionally, firm transmission rights not scheduled in day-ahead timeframe are released as non-firm transmission under the OATT.
- Should PTP firm transmission rights, not scheduled by the time of the DA market run, be made available to EDAM for optimization?
 - Potential redispatch implications to the extent the rights are exercised between day ahead and real-time.

Example – Unscheduled Transmission Rights



Scenario:

- Customer A has a 100 MW PTP reservation (into EDAM Entity B), which has not been made available to the day ahead market to support transfers between EDAM Entity A and B.
- In day ahead, Customer A schedules 75 MW of the transmission reservation, with 25 MW remaining unscheduled.
- Day Ahead Market optimizes the 25 unscheduled MW to support other EDAM transfers.



Real Time Market Dispatch

James Lynn

Senior Advisor – Market Settlement Design

Date

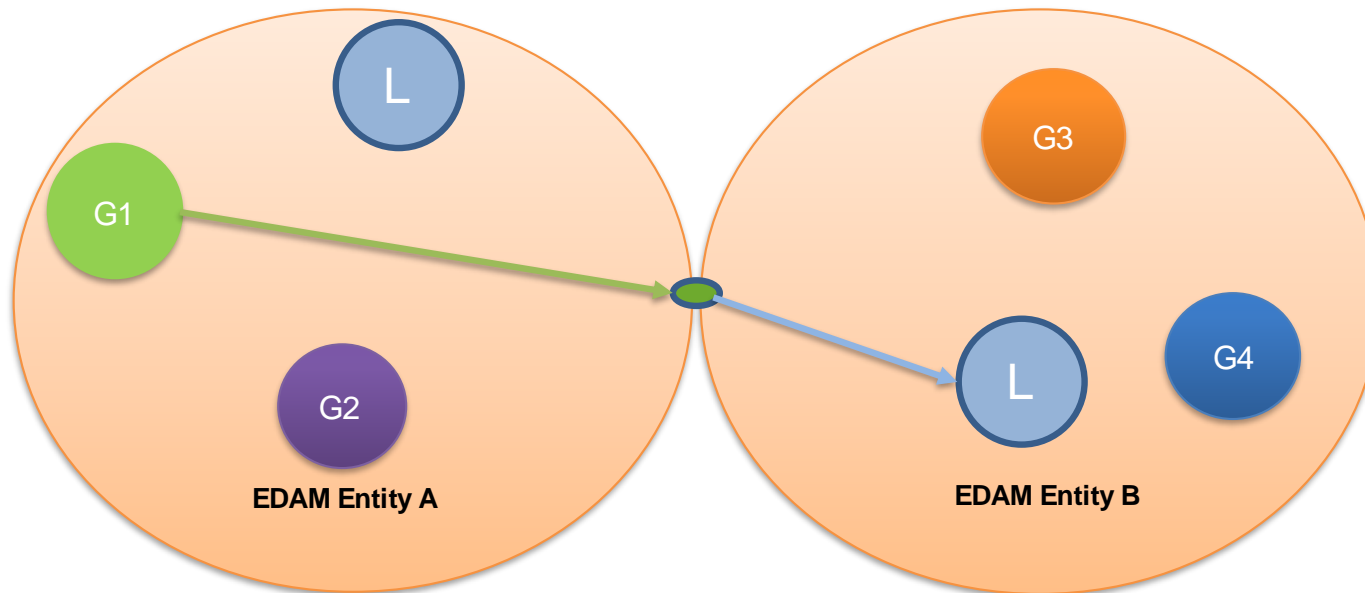
Topics

- Real Time Market Redispatch Driver
- Settlement Implications

Fundamental drivers of Real Time Market dispatch

- Real Time Market Demand forecast changes
 - Demand Forecast change from Day Ahead
 - Demand forecast change from Base schedule
- Economic energy dispatch
 - Re-dispatch based upon bids
 - Flexible ramp requirements
- Expanded Market Footprint
 - WEIM generation bids
 - WEIM Load forecast demand
 - WEIM Flexible Ramp Requirements
- Outages
 - Transmission or Generation

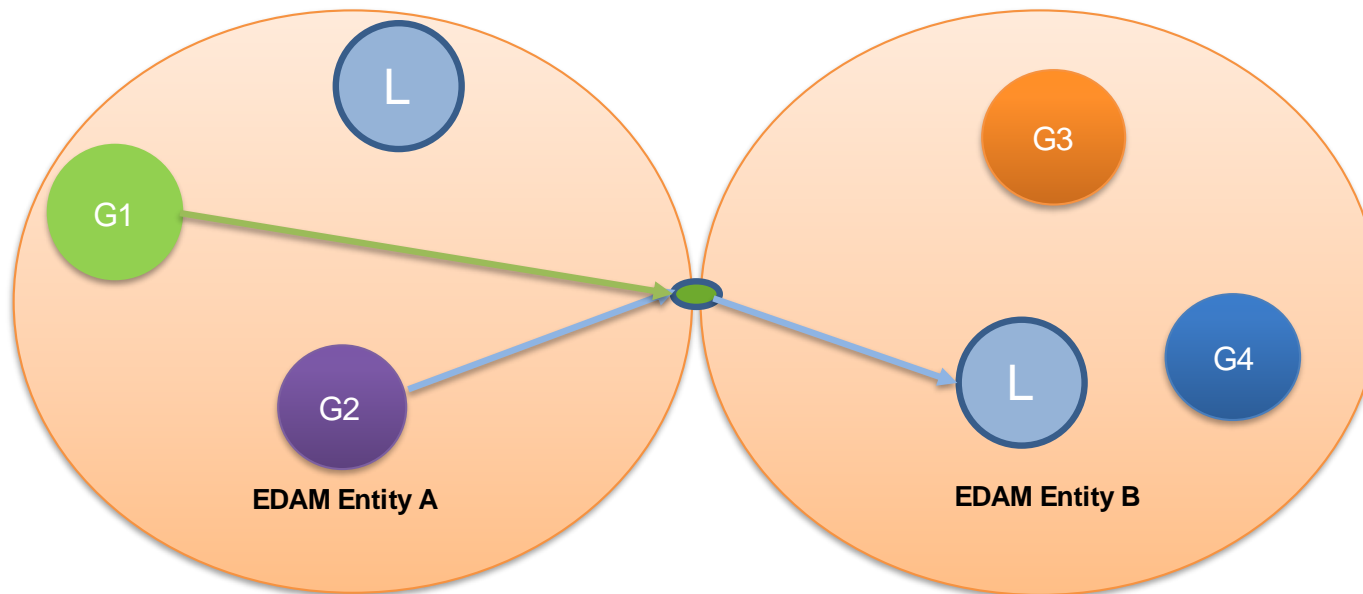
Day Ahead Market Solution



EDAM BAA A	
G1	700 MWs
G2	500 MWs
Load	(1100 MWs)
Transfer	(100 MWs)

EDAM BAA B	
G1	300 MWs
G2	500 MWs
Load	(900 MWs)
Transfer	100 MWs

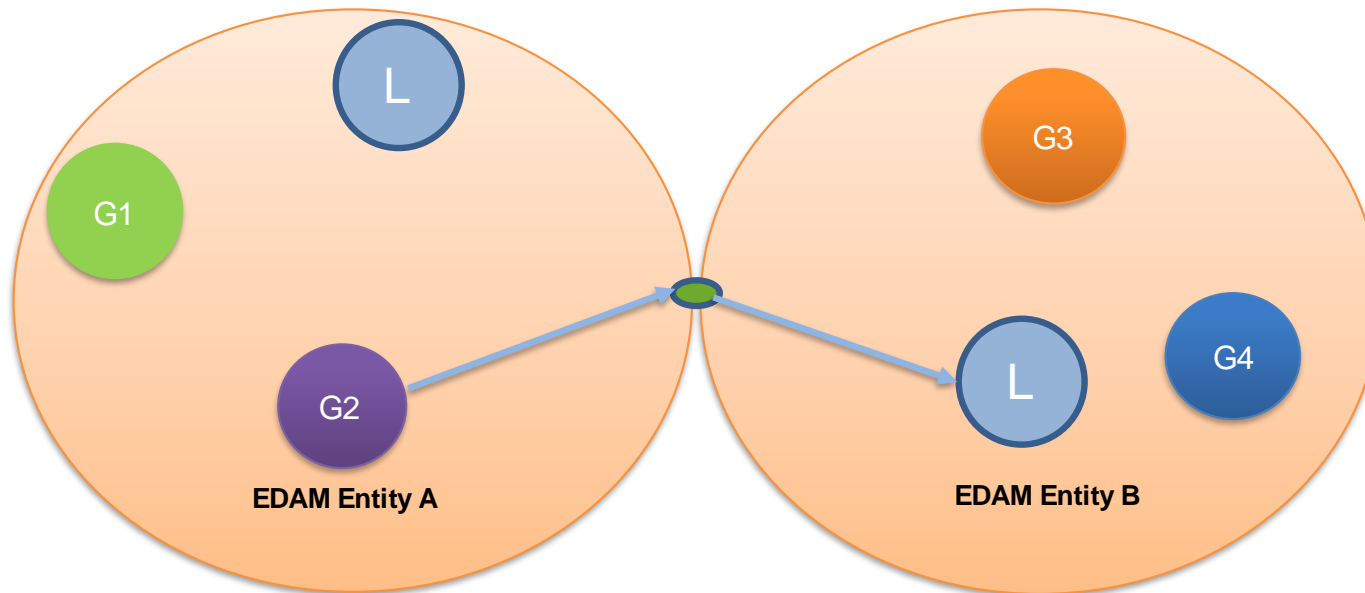
Real Time Market Demand forecast changes



EDAM BAA A	
G1	700 MWs
G2	600 MWs
Load Forecast	(1200 MWs)
Transfer	(200 MWs)

EDAM BAA B	
G1	300 MWs
G2	500 MWs
Load Forecast	(1000 MWs)
Transfer	200 MWs

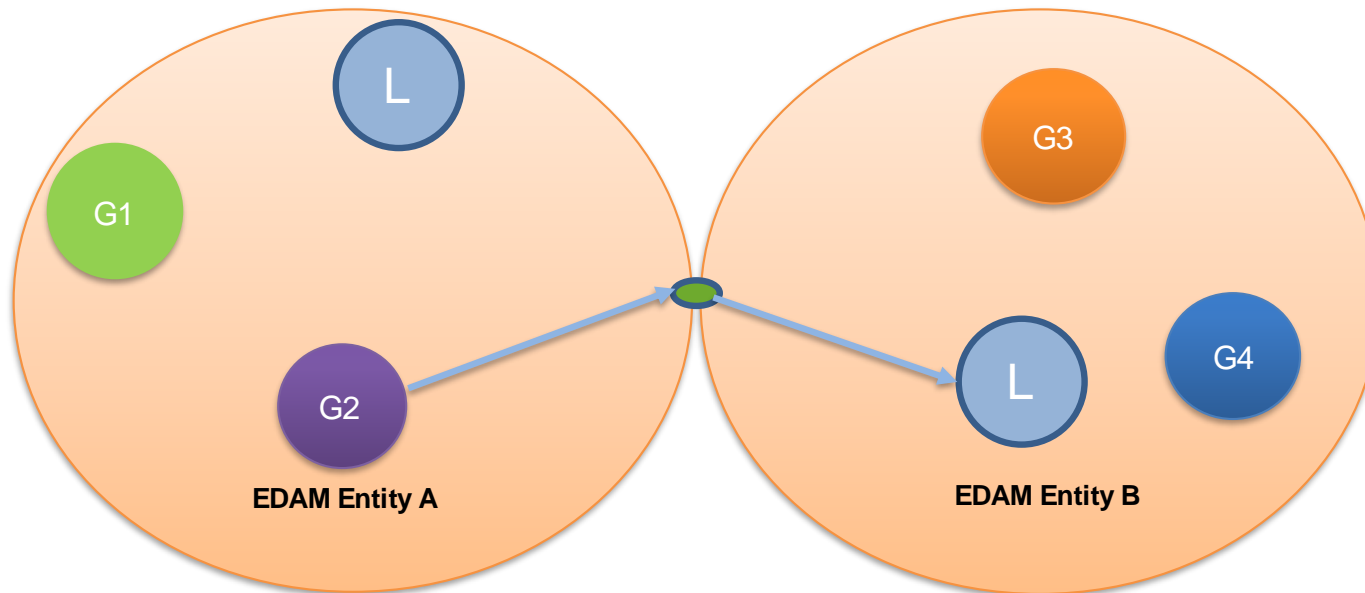
Economic displacement



EDAM BAA A	
G1	700 MWs
G2	600 MWs
Load Forecast	(1200 MWs)
Transfer	(100 MWs)

EDAM BAA B	
G1	300 MWs
G2	500 MWs
Load Forecast	(900 MWs)
Transfer	100 MWs

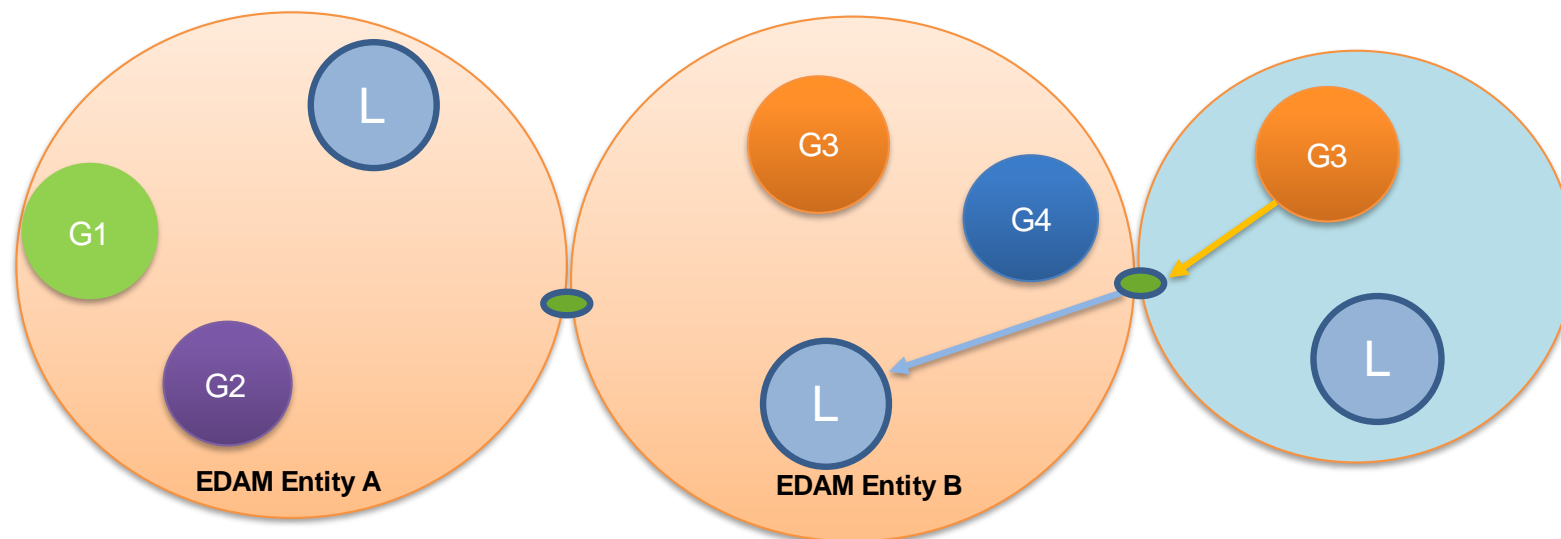
Economic displacement



EDAM BAA A	
G1	700 MWs
G2	600 MWs
Load Forecast	(1100 MWs)
Transfer	(200 MWs)

EDAM BAA B	
G1	200 MWs
G2	400 MWs
Load Forecast	(900 MWs)
Transfer	200 MWs

Expanded Market Footprint (WEIM)



EDAM BAA A	
G1	700 MWs
G2	500 MWs
Load	(1100 MWs)
Transfer	(0 MWs)

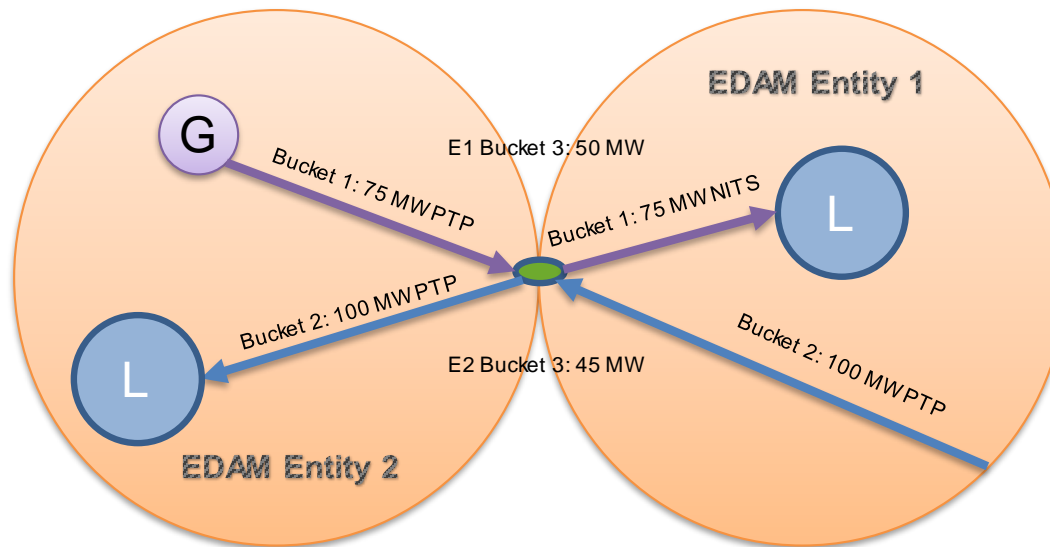
EDAM BAA B	
G1	300 MWs
G2	500 MWs
Load	(900 MWs)
Transfer	100 MWs

EIM BAA C	
G1	600 MWs
Load	(500 MWs)
Transfer	(100 MWs)

Settlement Consequences

- FMM or RTD imbalance energy settlement for generation dispatch
- Load uninstructed imbalance energy settlement
- Real Time Transfer Revenue
- Real Time Flexible Ramp Settlement
- Bid Cost Recovery

Comprehensive Example – Transmission Buckets 1-3



Bucket 1 transmission: 75 MW (in direction of Entity 2 to Entity 1)
Bucket 2 transmission: 100 MW (in direction of Entity 1 to Entity 2)
Bucket 3 transmission: 50 MW (Entity 1 to Entity 2 direction); 45 MW (Entity 2 to Entity 1 direction)

- Aside from optimizing generation internal to the BAA, the transmission at the interface (Bucket 1-3) is optimized to support EDAM transfers between Entity 1 and Entity 2.

Consideration of Unscheduled NITS

- Designated Network Resources (DNR) can be utilized to support resource sufficiency.
 - Example: a 100 MW import DNR is used in a particular hour for 75 MW toward demonstrating sufficiency (and brings 75 MW of Bucket 1 transmission across transfer point).
- To the extent the full DNR is utilized in particular periods to demonstrate resource sufficiency, can the unscheduled amount be made available to EDAM as either Bucket 2 or 3 to support EDAM transfers?
 - For example, the remaining 25 MW in scenario described above.

EDAM Resources

- List of [*Common EDAM design principles and concepts*](#)
- Initiative and working webpages:
 - EDAM initiative webpage: <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market>
 - Working Group 2 webpage: <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-Day-Ahead-Market-Working-Group-2-Transmission-Commitment-Congestion-Revenue-Allocation>
 - The working group webpages include meeting materials, initial scope items, and weekly summary reports
- Please submit EDAM WG inquiries and/or requests to present at <https://www.surveymonkey.com/r/EDAMWG-Inquiries>
 - Presentations due 5 business days prior to the meeting where they are scheduled to present, if time allows
- [Register](#) for working groups to help the ISO gauge interest and facilitate communication throughout process.
- Nov 30, 2021 Day-Ahead Market Overview Training: <https://youtu.be/lbXRsfVbCg>