

# EIM Stakeholder Meeting

February 20, 2019  
9am -12pm  
Rates Hearing Room



# For our WebEx and phone participants:

- We have muted all calls on entry, if you have a question, you will need to unmute by using \*6. Then please identify yourself by name and let us know who you represent.
- Please do not put this call on hold OR take other calls while you are dialed into this one.
- If we identify a noisy line, you may be disconnected from the meeting.

# Agenda

9:00-9:05

- Welcome, Safety Moment, Introductions

9:05 – 9:10

- Topics for Today's Meeting
- Review of BPAs EIM Principles
- Review Timeline

9:10 – 10:00

- Local Market Power Mitigation

10:00 – 10:15

- Break

10:15 – 11:30

- Base Case Structured Scenario Discussion

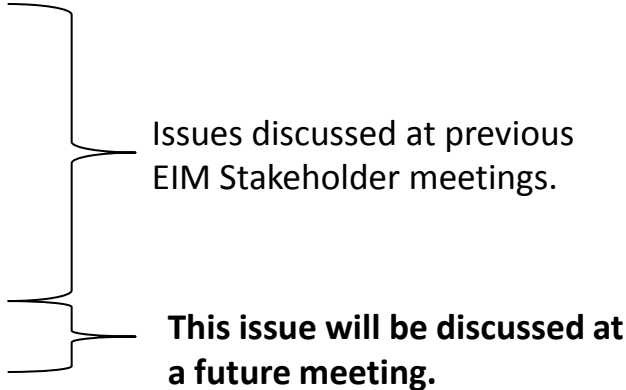
11:30 – Noon

- Next Steps
- Question and Answer Session

# Topics For Today's Meeting

- Review of EIM Stakeholder Topics Discussed to Date
- Timeline Review
- Issues that BPA presented at the July 24<sup>th</sup> EIM Stakeholder meeting that we will be discussing in more depth at a future meeting.

1. Relationship of EIM to Other Emerging Markets
2. BA Resource Sufficiency
3. EIM Settlements
4. Market Power
5. Treatment of Transmission
6. Generation Participation Model (FCRPS)
7. Governance
- 8. Carbon Obligation in EIM**



Issues discussed at previous  
EIM Stakeholder meetings.

**This issue will be discussed at  
a future meeting.**

- Question and Answer Session

# Statement of BPA's Principles:

1. Participation is consistent with statutory, regulatory, and contractual obligations.
2. Maintain reliable delivery of power and transmission to our customers.
3. Resource participation in the EIM is and always will be voluntary.
4. BPA's decision to participate in the EIM will be based on a sound business rationale.

# Timeline Leading up to the ROD

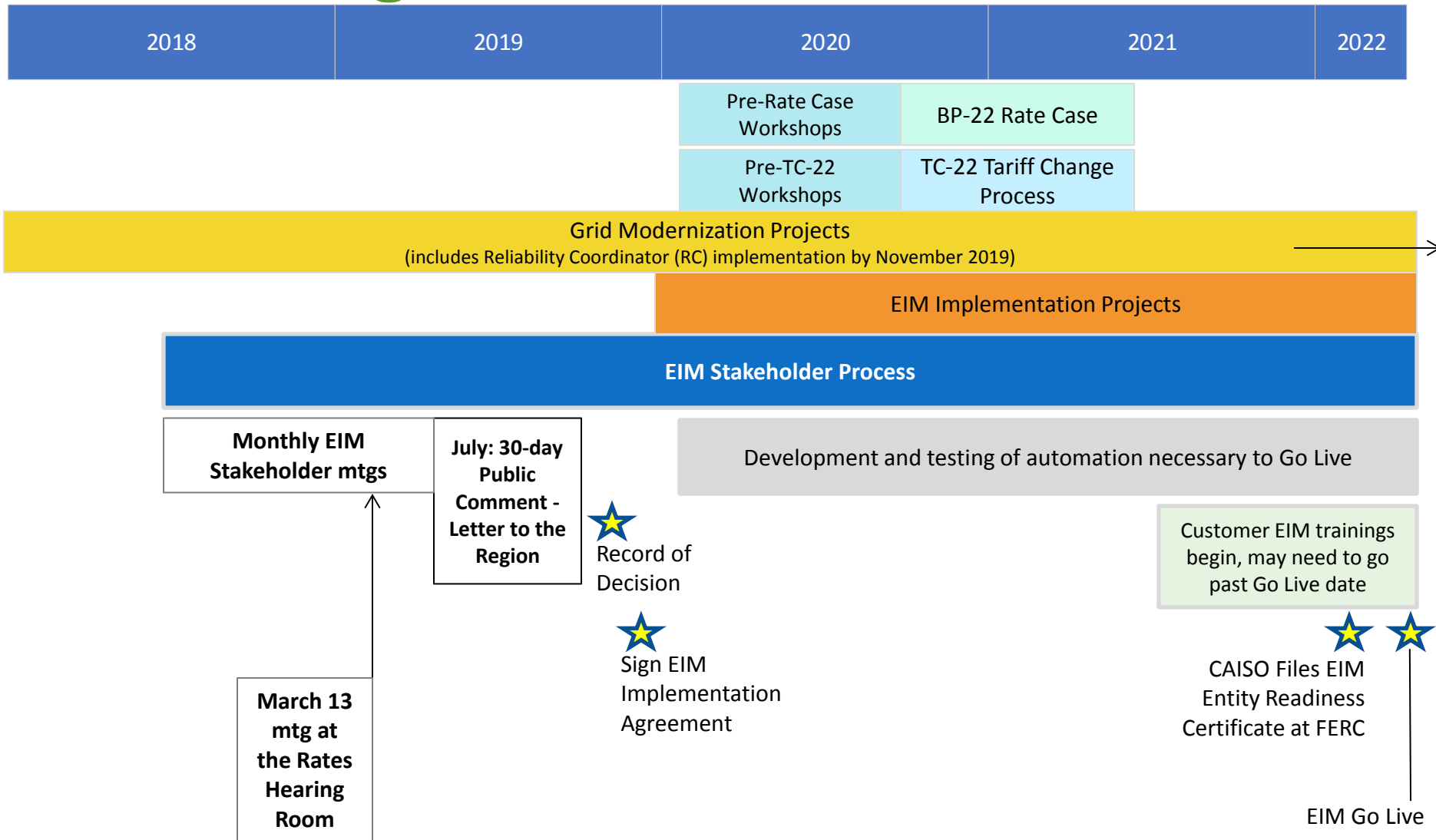
Agendas for previous and future monthly EIM Stakeholder meetings:

July 24	•Grid Modernization Overview, Strategic Plan Connection, Intro to 8 Issues BPA is Reviewing, Initial Cost Benefit Analysis
September 13	•EIM 101
October 11	•Process Plan, Transmission, Generation, Governance
November 14	•Process Plan, Market Power
December 18	•Settlements, Non-Federal Generation Participation
January 16	•Resource Sufficiency, Emerging Markets
February 20	•Base Case Structured Scenario, Market Mitigation
March 13	•Settlements, Structured Scenario
April 10	<b>Structured Scenarios:</b> Discussion of Impacts to Customers
May 15	
June	<b>Issues to be Discussed at upcoming monthly EIM Stakeholder meetings:</b> 1. Cost Benefit Analysis 2. Carbon in the EIM
July	
August	•BPA drafts Record of Decision (ROD)
September	•Final ROD for signing the EIM Implementation Agreement

These meetings will be full day.

Signing of the EIM Implementation Agreement authorizes BPA to begin spending on EIM implementation projects with the CAISO but does not bind BPA to join the EIM.

# BPA's High Level EIM Timeline



# EIM Issues and Venues

- BPA has been tracking EIM issues that will be resolved in future BPA processes or workshops where BPA anticipates EIM issues will be addressed.

Letter to Region/ Implementation Agreement ROD	TC-22 Tariff Terms & Conditions Case	BP-22 Rate Case	Business Practices	Other
Joining the EIM is consistent with BPA's statutory authority	Explanation of EIM charges codes	Cost Allocation – which rates bear which EIM costs		
Business Case / Cost Benefit Analysis	Dispute Resolution process for EIM charges			



# Local Market Power Mitigation



# CAISO Market Power

The CAISO Department of Market Monitoring (DMM) is responsible for protecting consumers and market participants by identifying and reporting:

- Market design flaws
- Potential market rule violations
- Market power abuses

When there is a binding constraint, how is Market Power measured?

- Pivotal Supplier Test
  - If supply is insufficient to meet demand with the supply of any individual supplier removed, then this supplier is pivotal
- Residual Supply Index
  - The residual supply index is the ratio of supply from non-pivotal suppliers to demand
  - A residual supply index less than 1.0 indicates an uncompetitive level of supply

If determined to have market power, a market participant may have its CAISO bid prices mitigated to a Default Energy Bid (DEB), which will be used for CAISO's optimization

# Default Energy Bids

The CAISO currently employs 3 options for calculating a participant's, or resource's, DEB

1. Variable Cost Option
  - Based on heat rate, fuel price, GHG costs, etc.
2. Locational Marginal Price (LMP) Option
  - Based on lowest 25<sup>th</sup> percentile of LMPs at which resource was dispatched in the last 90 days
3. Negotiated Rate Option
  - Formula negotiated between the resource's scheduling coordinator and CAISO/DMM

There is concern that none of the cost options adequately reflect the opportunity cost applicable to fuel-limited hydro resources

- Opportunity cost is influenced by:
  - Non-power obligations of hydro resources
  - Expected value of energy in future periods
  - Physical system characteristics (storage, flow limitations, hydrological topology, generating capability)
  - Risk preference of hydro operator

## Recent Developments: Market Power & DEBs

The CAISO has been receptive to concerns expressed by NW parties, and is proceeding with an initiative that proposes enhancements to current LMPM and DEB implementation. Potential market changes would apply to the entire ISO market, in addition to the EIM.

Major issues have been largely satisfied, such as:

- **Mitigate for the right time interval:** Mitigation should only apply to the interval when market power has been determined (not balance of the hour)
- **Mitigate the right quantity:** Do not mitigate supply that is voluntary in nature (mitigation only applies to supply needed for RS, Flexi Ramp Up, and diversity credit)
- A proposed **DEB option that reflects the opportunity cost of hydro;** including the recognition of the combined value of energy and firm TX rights when coupled together (see coming slides)
- The specific parameters (such as the multiplier levels) can be updated upon request

# CAISO Proposed Hydro DEB Calculation

The newly proposed DEB accounts for:

- Maximum storage horizon
- Ability to sell energy at different locations inside and outside of the BA
- Opportunity cost of generation by substituting local gas resources
- Potential short-term limitations

$$DEB = MAX (\textit{Gas Floor}, \textit{ST Floor}, \textit{LT Geo Floor})$$

Where:

$$\textit{Gas Floor} = (\textit{Peaker Heat Rate} * \textit{Gas Price Index}) * 1.1$$

*Daily peaks / Replacement Cost*

$$\textit{ST Floor} = MAX(\textit{DA Index}, \textit{BOM Index}, \textit{M Index}_{+1}) * \textit{Mult}$$

*Short-Term / Local OC*

$$\textit{LT Geo Floor} = MAX(\textit{DA Index}, \textit{BOM Index}, \textit{M Index}_{+1}, \dots, \textit{M Index}_{+12}) * 1.1$$

*Long-Term / Different Trading Hubs OC*

Gas floor may be updated in real-time if needed

This content is taken from the LMPM Enhancements Draft Final Proposal (Updated) , page 35

[http://www.caiso.com/Documents/DraftFinalProposal-LocalMarketPowerMitigationEnhancements-UpdatedJan31\\_2019.pdf](http://www.caiso.com/Documents/DraftFinalProposal-LocalMarketPowerMitigationEnhancements-UpdatedJan31_2019.pdf)

# CAISO Proposed Hydro DEB: Stress Events

Recall that the most concerning impact of an overly restrictive default energy bid – a DEB that does not accommodate potential differences in reasonable views of a hydro resource’s opportunity cost – was unintended dispatch.

- Depletion of resource’s fuel prior to a stress event
- Uneconomic / unreliable market outcomes

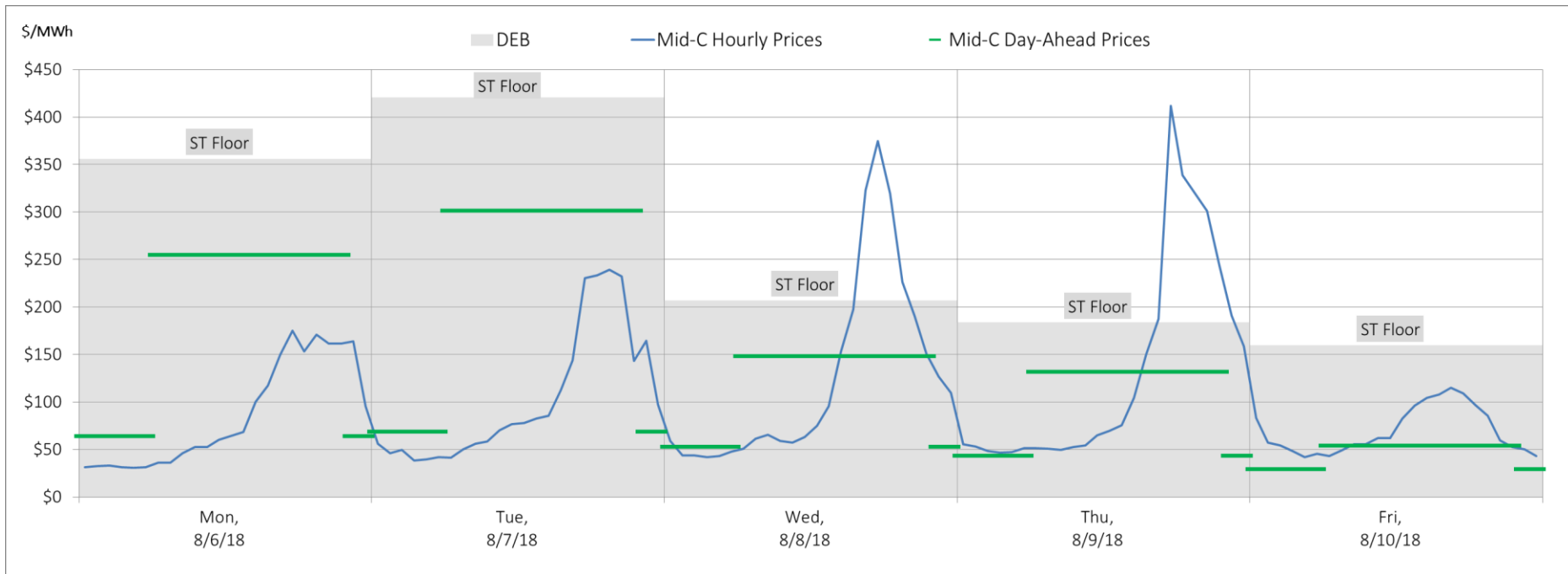
Under typical or normal conditions there appears to be little or no unintended dispatch and/or uneconomic outcomes

To estimate the potential for unintended dispatch and/or uneconomic outcomes, BPA retrospectively tested the proposed default energy bid formulation against historical market conditions, with a specific focus on several market-stress events

- Anticipated Stress Event: market and operational response is anticipated prior to event
- Unplanned Stress Event: market and operational response coming in near real-time

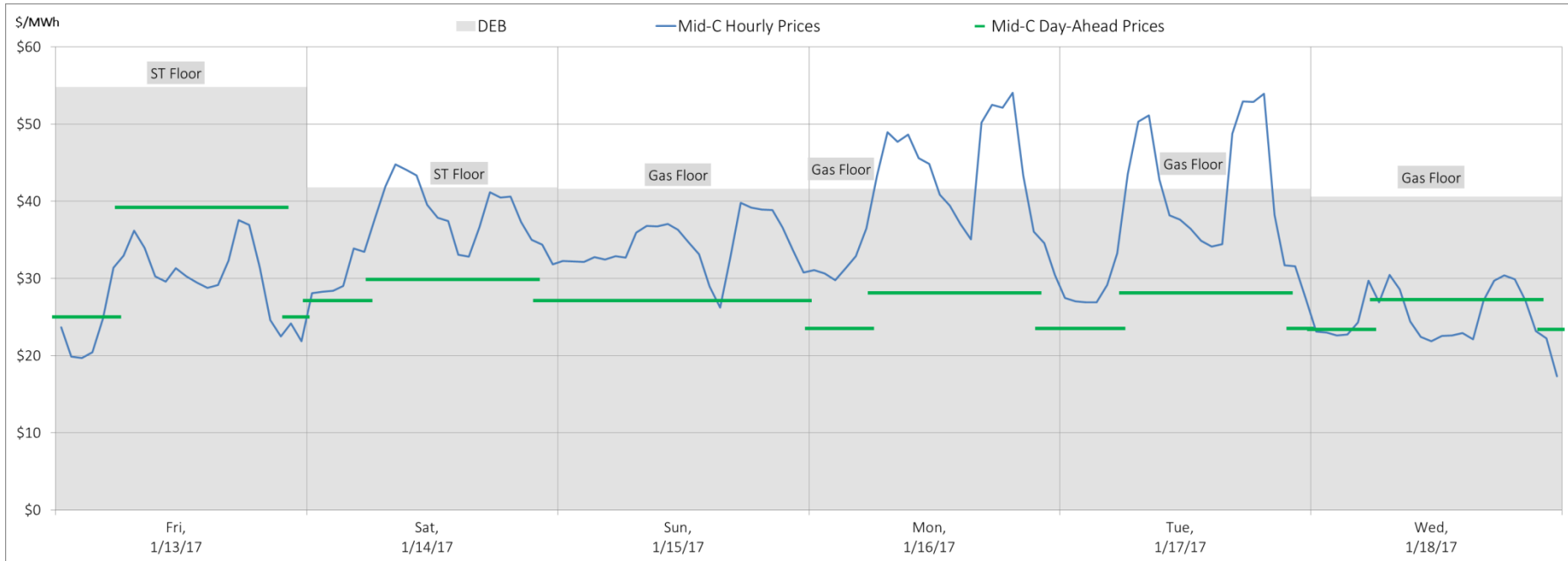
Note: we did not incorporate trading hubs beyond Mid-C into the LT Geographic Floor

# DEB Response - Anticipated Event



- **Event Description:** West-wide heat Portland, Seattle and Spokane experiencing temps in the low 90s with significantly elevated southern California gas prices drive elevated power prices across the west.
- **Observations:** DEB responds as expected to market signals; NW hourly prices remain high during the evening peak hours. Premature dispatch is avoided, preserving limited energy for periods of high market stress. Hydro resources participating in the EIM during the stress periods would have been awarded a price lower than NW hourly indexed price if they were found to have market power.

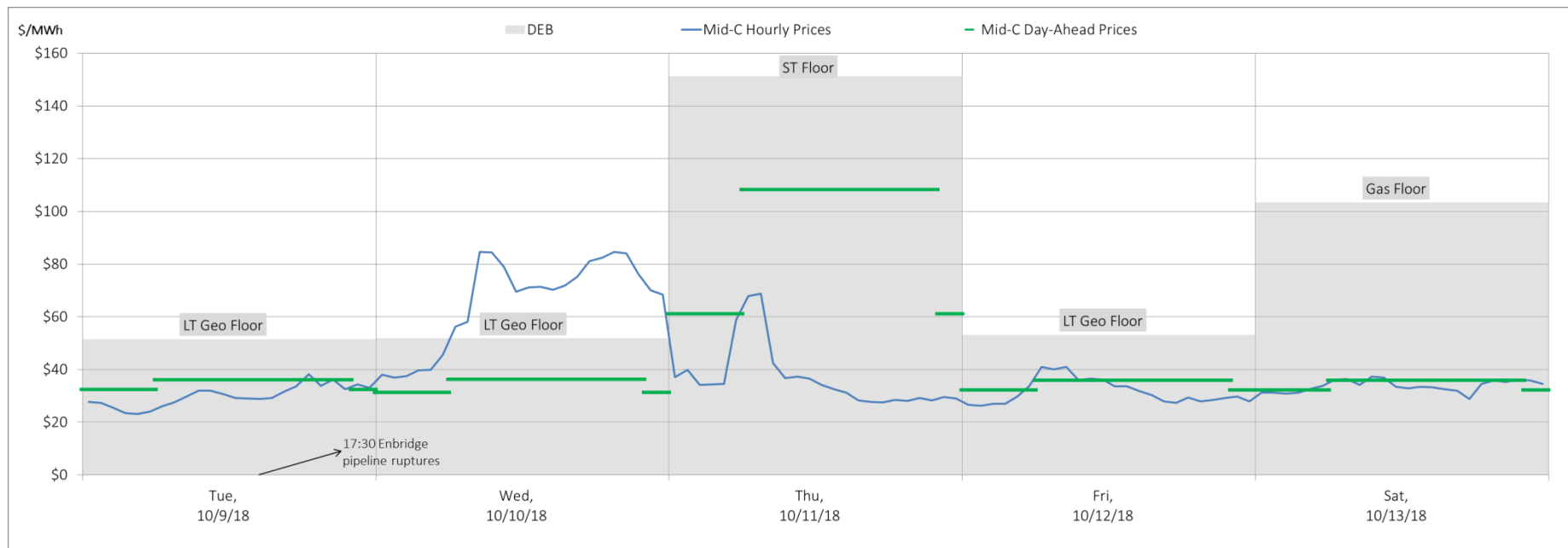
# DEB Response - Anticipated Event



- **Event Description:** NW cold snap with temperatures regularly more than 15 degrees below average and spanning a holiday weekend. Holiday trading exacerbated the normal lag between trading day and delivery day (DA price on 1/17 determined on 1/13).
- **Observations:** Highlights the downside of the Gas/NW trading schedule as the DEB is indexed to stale NW day-ahead prices. NW hourly prices remain high during the morning and evening peak hours. Premature dispatch is largely avoided, preserving limited energy for periods of high market stress. Hydro resources participating in the EIM during the stress periods would have been awarded a price lower than a NW hourly indexed price if they were found to have market power.



## DEB Response - Unanticipated Event



- Event Description:** The Westcoast Pipeline explosion occurred late on October 9, 2018, and significantly impacted the main route for supplying natural gas to western Washington and Oregon. The reduced supply immediately caused industrial demand and gas-fired power generation to drop and resulted in elevated prices for natural gas and power within the region.
- Observations:** Given the timing of the event, the DEB response is delayed. Hydro resources participating in the EIM during the event would have been awarded a price lower than NW hourly indexed price if they were found to have market power.

# Summary

- The current CAISO proposal balances competing objectives
  - opportunity cost nature of hydro
  - efficient and economic market outcomes
  - current and future resource participation levels
  
- During the stress periods, the dispatch of hydro generation remained as planned through out the duration of the event
  
- While infrequent, there are conditions when hydro resources participating in the EIM would have been awarded a price lower than NW hourly indexed price if they were found to have market power.
  
- Current proposal addresses concerns. In addition, BPA may avail itself of any DEB option, including a negotiated option.

# Structured Scenario: Base Case



# Structured Scenarios: Overview

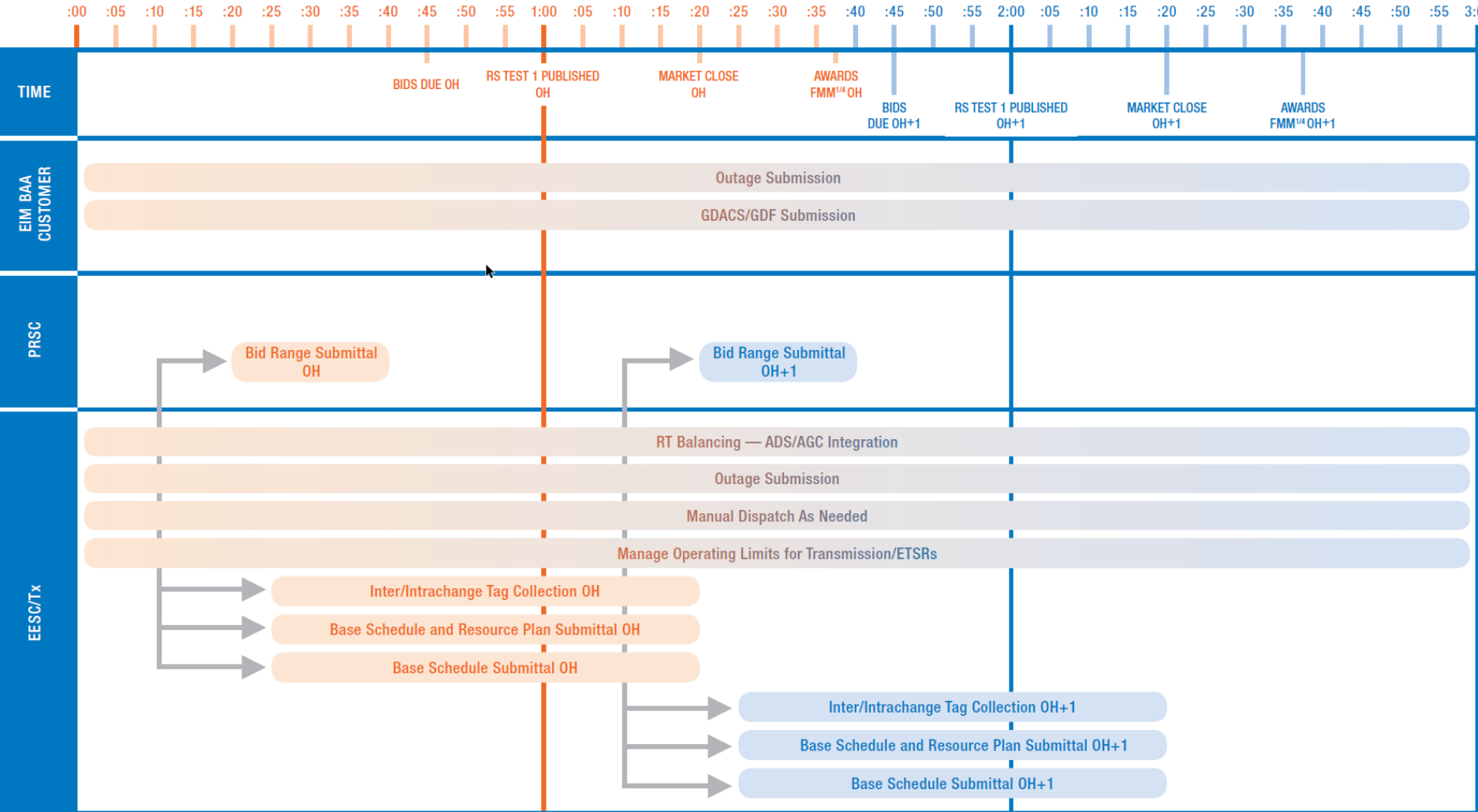
- BPA will use structured scenarios, or “table tops”, to walk through EIM mechanics for customers and stakeholders.
- These structured scenarios are intended to provide education and to identify how certain activities would impact EIM operations and settlements.
- These outcomes should help customers and stakeholders begin to understand how BPA’s EIM participation would:
  - Potentially impact their business and operations, and
  - Help them prepare for how EIM issues would be addressed in upcoming Rates and Terms & Conditions Cases.

# Structured Scenarios

	Transmission Congestion In Market	Participating Resources	Scheduling	Real-Time Reliability Actions (Out of Market)
<b>Scenario 1: Base Simple</b>	<ul style="list-style-type: none"> <li>None – ETSRs and internal constraints are non-binding</li> </ul>	<ul style="list-style-type: none"> <li>FCRPS aggregated into three zones</li> </ul>	<ul style="list-style-type: none"> <li>All base schedules (inter and intrachange) completed by T-40 and flat for the hour</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<ul style="list-style-type: none"> <li><b>Scenario 1a: Base with Export Reduction</b></li> </ul>	<ul style="list-style-type: none"> <li>“</li> </ul>	<ul style="list-style-type: none"> <li>“</li> </ul>	<ul style="list-style-type: none"> <li>All base schedules (inter and intrachange) completed by T-40 with reduction in exports within the hour at XX:10 by 75 MW</li> </ul>	<ul style="list-style-type: none"> <li>“</li> </ul>

# Structured Scenario: Base Case

The base case scenario describes what actions BPA would take to engage in the EIM market during specified operating hours (OH).



# Key Roles in EIM for Structured Scenarios

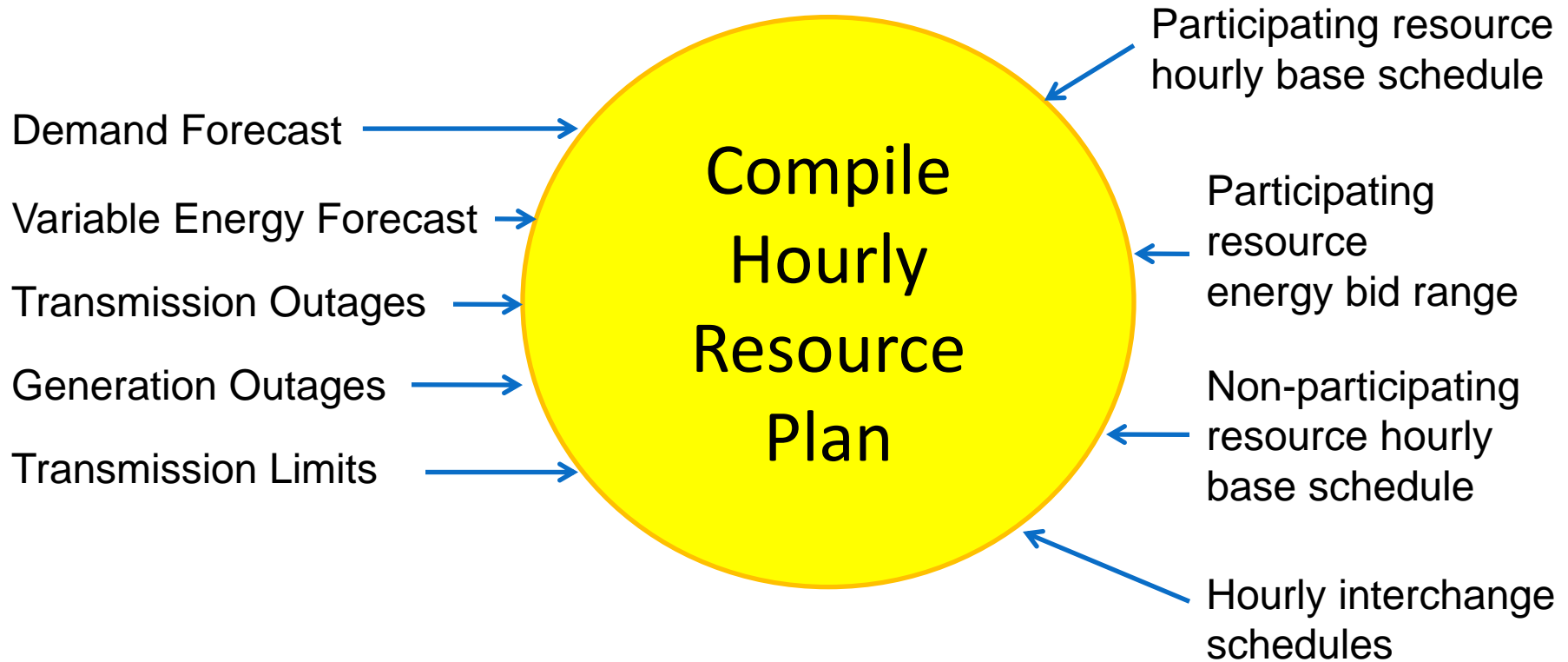
- EIM Entity Scheduling Coordinator (EESC)
  - Directly interfaces with both BPA Balancing Authority (BA/BAA) customers and with the CAISO.
  - Manages systems and processes related to real-time balancing, scheduling/tagging, and submission of Resource Sufficiency (RS) and interchange data to CAISO.
  - Settles financially with the CAISO for the BAA invoices and with customers for BPA's own Ancillary and Control Area Services (ACS) invoices.
- Participating Resource Scheduling Coordinator (PRSC)
  - May be fulfilled in BPA or customers (non-BPA) may also serve in this role.
  - Submits bids for Participating Resources.
  - Settles directly with the CAISO for Participating Resource Invoices

# Key Roles in EIM for Structured Scenarios

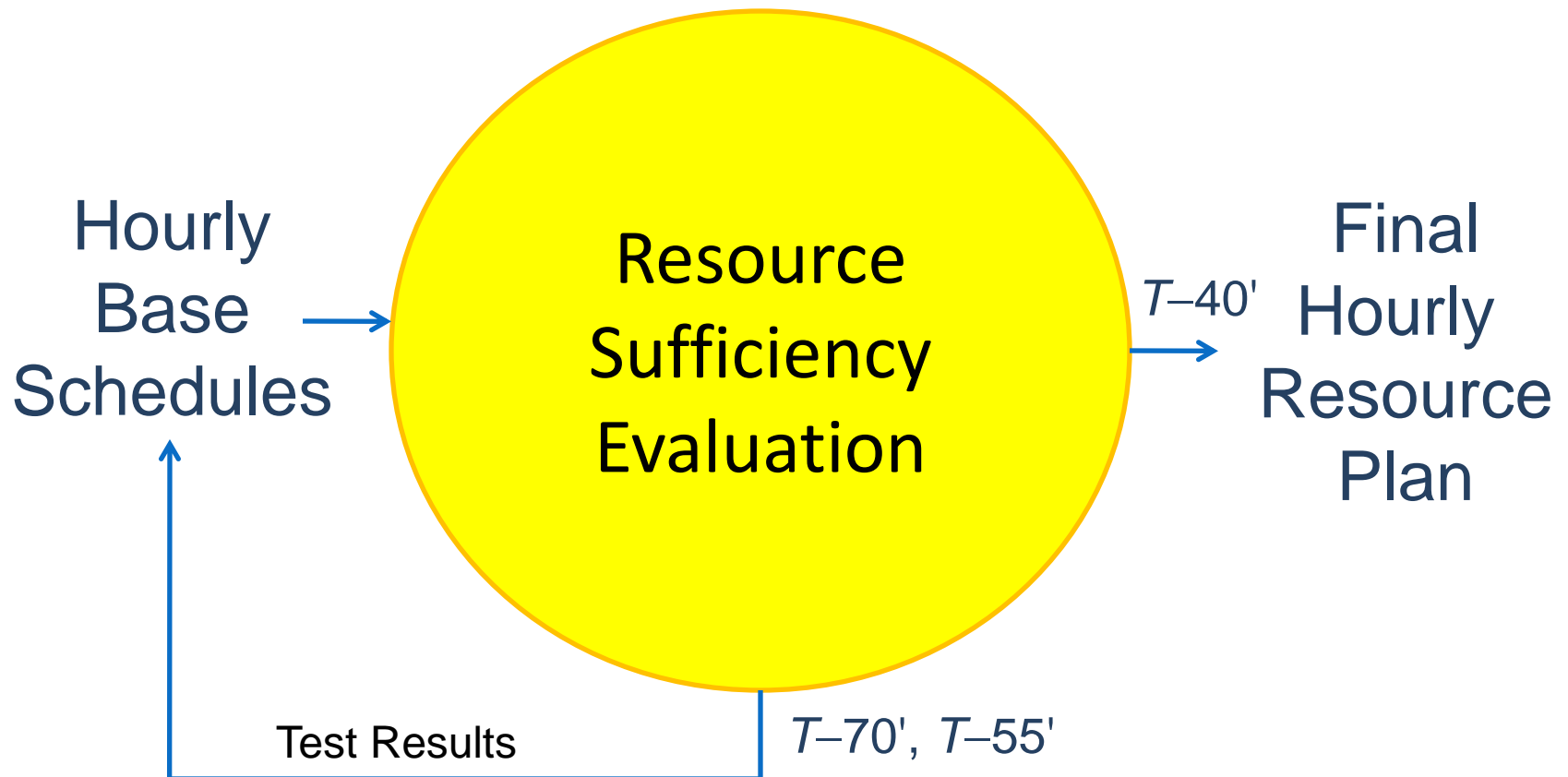
- BPA BA Customers
  - Individual, non-BPA customers, may perform multiple functions when we join the EIM.
  - Non-load following customers will need to submit base schedules for load and resources to the EESC. This information is used for the EESC submission of the EIM Entity Base Schedule and Resource Plan.
  - Interacts directly with the EESC, not the CAISO if they don't own a Participating Resource.



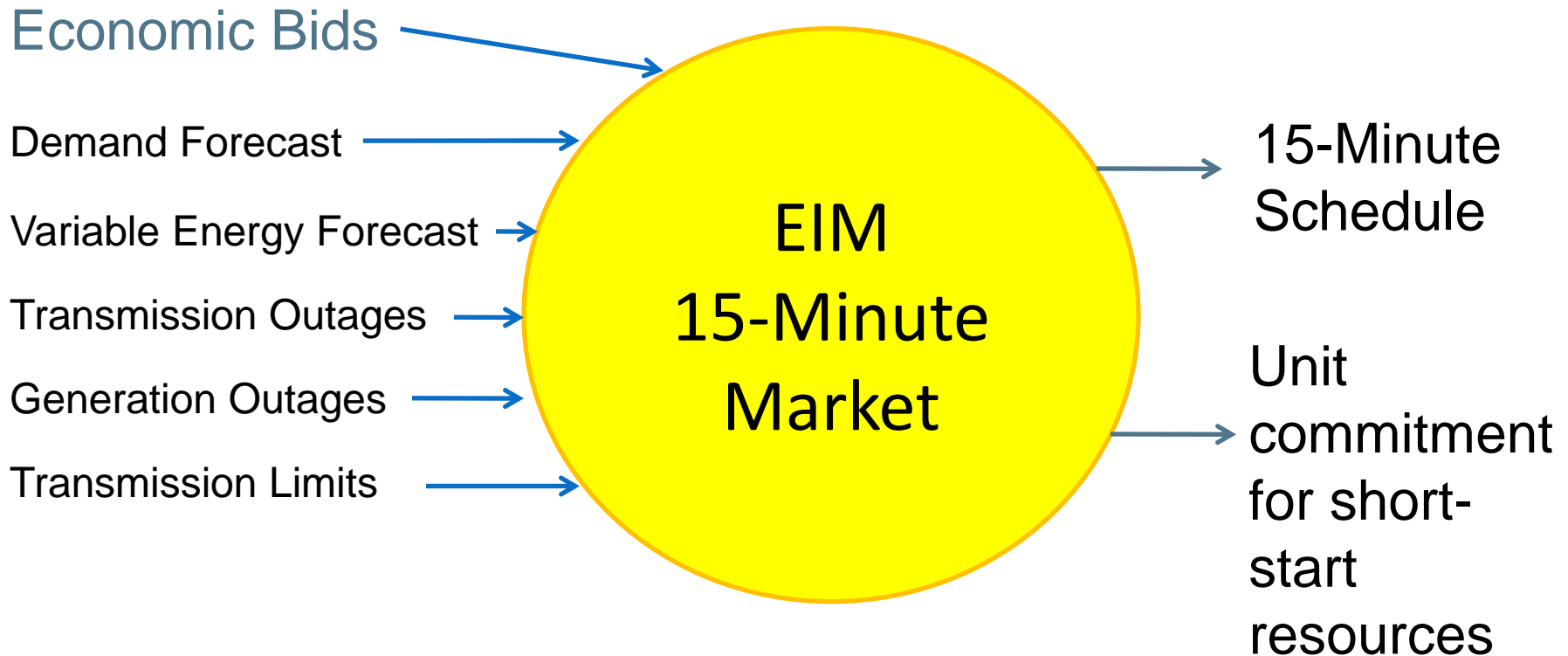
# Market Activities



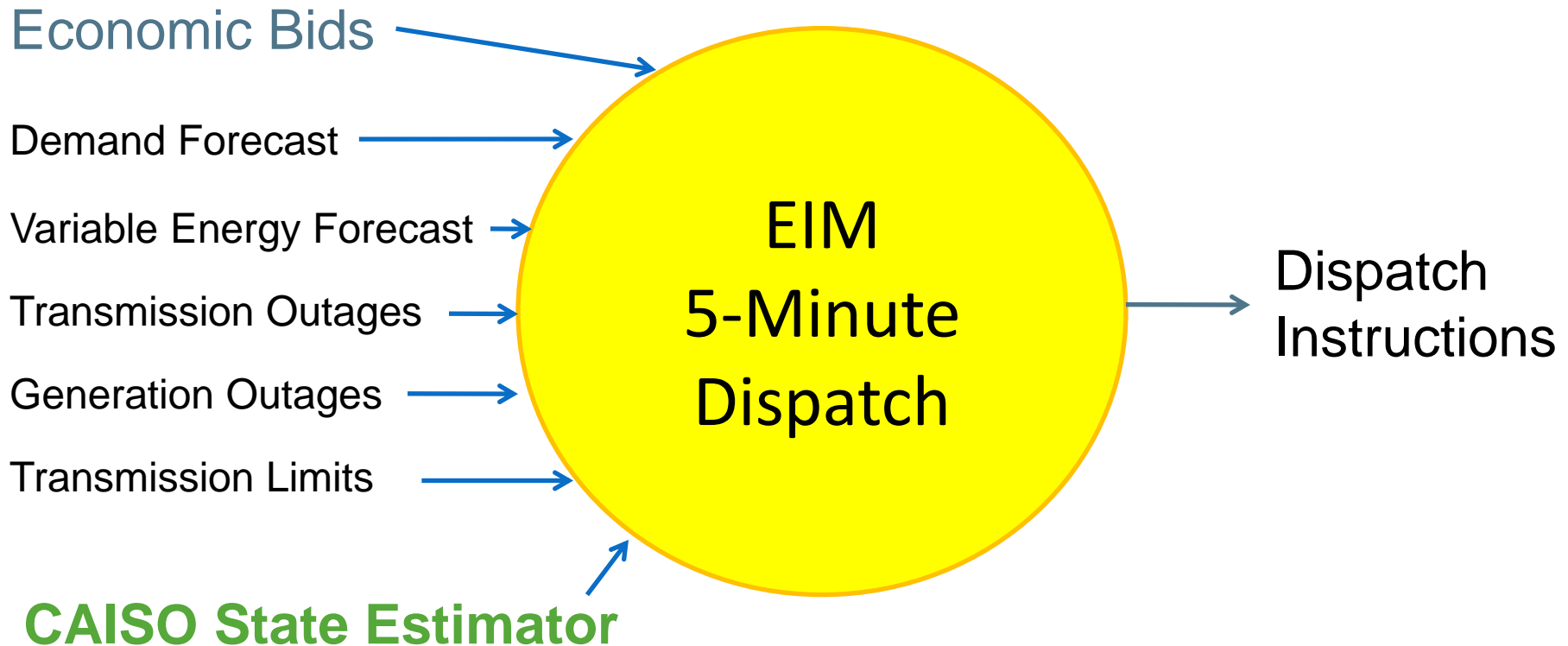
# Market Activities



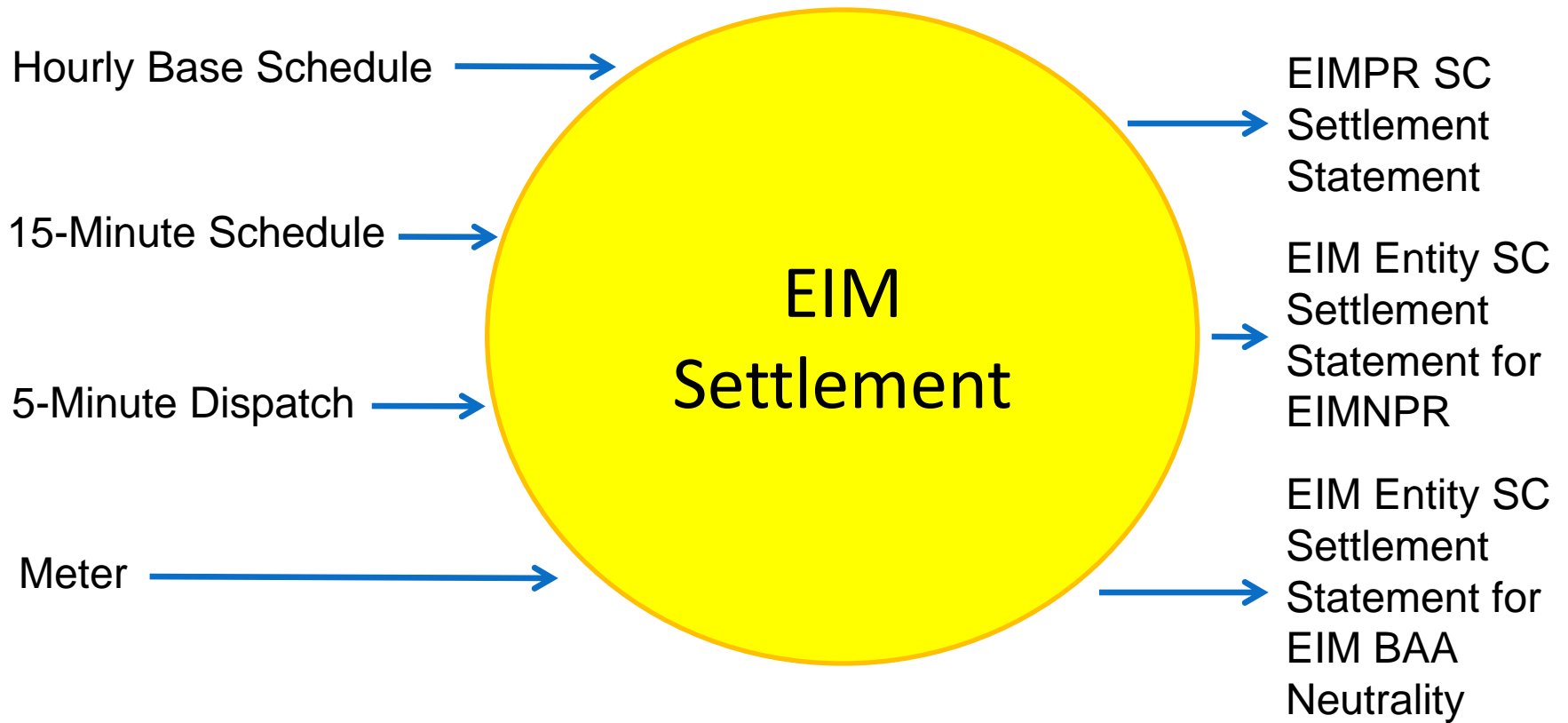
# Market Activities



# Market Activities



# Market Activities



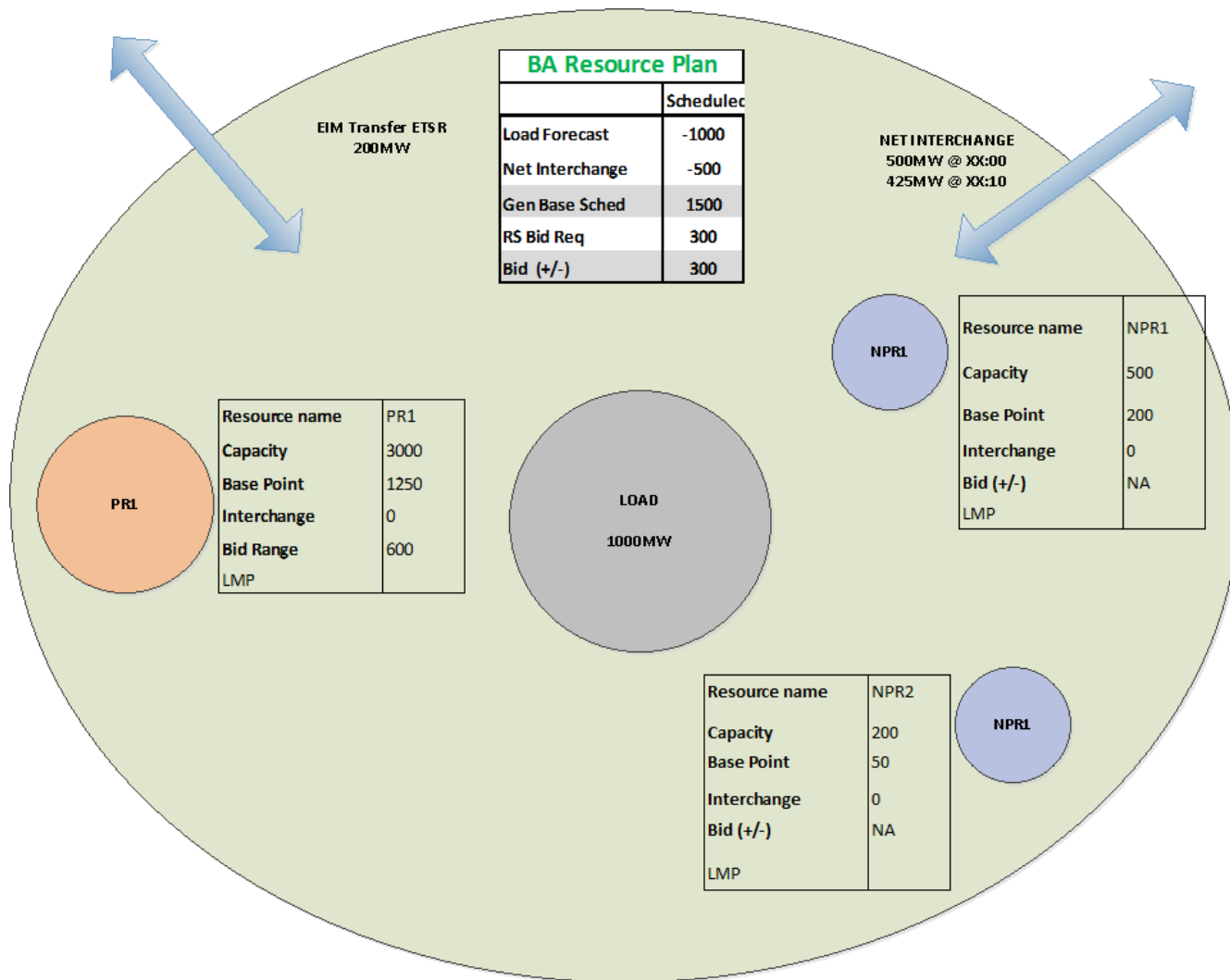
# Structured Scenario: Base Case

- Today's focus is on a "Base Case", which is an extremely simplified example of EIM Operations intended to create a foundation of essential EIM functions.
- This case is not meant to represent how BPA's actual operations would work, rather to provide a sort of "pure" example from which future scenarios and analysis can be compared.
- As such, assumptions are made for the purpose of the Base Case for multiple decisions that have not yet been made by BPA.

## Base Scenario with Interchange

- Today's scenario has one source of imbalance, which is a reduction in interchange.
- Absent an auto-match the market will match the interchange deviation.
- Though there are 200MW of ETSR's made available this scenario assumes the single Participating Resource in the BAA is the economic resource.

# Base Scenario Overview





# Key Actions

- See BPA EIM Scenario Worksheet No. 1

## **BPA EIM Structured Scenario Worksheet**

### **Structured Scenario Name: Base**

#### **Overview:**

- This scenario is meant to establish a “base case” against which other scenarios will be compared. The Base scenario describes the simplest reasonable operational conditions and actions for an EIM Entity and the Participating Resources to successfully navigate a single operational hour. The Base Scenario will help develop a fundamental understanding of EIM requirements and impacts which will help stakeholders identify those elements that are intrinsic to EIM Participation and present a comparison for future scenarios to identify those elements which are particular BPA and to individual customer actions.

#### **Assumptions:**

- Only one PRSC Participating Resources (PR) in Balancing Authority Area (BAA)
- BPA is using the FCRPS to pass all resource sufficiency evaluations
- We will have ETSRs to donate, and non-constrained
  - Use "customer donation" for imports/exports
  - PRSC would redirect PTP for ETSRs
  - Not defining at this point which other EIM Entity BAAS we are setting them up for
- Bid=RS requirements
- Tx = EIM Entity
  - EIM Desk, Gen Dispatch, Tx Dispatch
  - Questions about where functions lie - EIM Desk, integrated throughout Tx, or relationship with PG et al.
- Default Energy Bid (DEB) Reference price set in DA
- Can hit whole bid range in any interval for the purposes of the Flexible Ramp Sufficiency Tests
  - I.e., not ramp limited from hitting any Dispatch Operating Target (DOT)

**BPA EIM Structured Scenario Worksheet: Actions**  
**Structured Scenario Name: Base**

Up to T-55	
PRSC	<ul style="list-style-type: none"> <li>• Submit bids for OH (300MW)</li> <li>• Update Base Schedules for OH (1250MW/0MW)</li> <li>• Update GDFs for OH</li> <li>• Submit ETSR Tags (XMW) for OH (200MW)</li> </ul>
EESC/Operations	<ul style="list-style-type: none"> <li>• Pull tags and populate Base Schedule for OH (1500MW)</li> <li>• Update ETSR limits (&lt;/= ETSR Tags) for OH (200MW)</li> <li>• Update outages and other transmission limits for OH</li> <li>• Evaluate preliminary RS Tests for OH</li> </ul>
Customers	<ul style="list-style-type: none"> <li>• Submit Base Schedules (200MW/50MW)</li> <li>• Submit tags for inter/intrachange for OH</li> <li>• Submit ETSR tags if desired for OH</li> </ul>

T-55 to T-40	
PRSC	<ul style="list-style-type: none"> <li>• Preparing bids for next OH1</li> <li>• Update ETSR tags for OH if needed/directed</li> </ul>
EESC/Operations	<ul style="list-style-type: none"> <li>• Update Base Schedules and finalize Base Schedules and Resource Plan for OH</li> <li>• Outages and transmission limits as needed for OH</li> </ul>
Customers	<ul style="list-style-type: none"> <li>• Updating schedules as desired/directed for OH</li> </ul>

**BPA EIM Structured Scenario Worksheet: Actions**  
**Structured Scenario Name: Base**

T-40 to Start of OH	
<b>PRSC</b>	<ul style="list-style-type: none"> <li>• <b>Submit Bids for OH1</b></li> <li>• <b>Submit ETSR for OH1</b></li> <li>• <b>Outages for PR as needed for OH</b></li> <li>• <b>Update ETSR tags for OH as desired/directed</b></li> </ul>
<b>EESC</b>	<ul style="list-style-type: none"> <li>• <b>Receive and implement initial dispatches and operations for OH</b></li> <li>• <b>Update outages as needed for OH</b></li> <li>• <b>Implement schedule updates and communicate to MO as needed for OH</b></li> <li>• <b>Pull tags and populate Base Schedule for OH1</b></li> <li>• <b>Update ETSR limits (&lt;/= ETSR Tags) for OH1</b></li> <li>• <b>Update outages and other transmission limits for OH1</b></li> <li>• <b>Evaluate preliminary RS Tests for OH1</b></li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>• <b>Update tags as desired/directed for OH</b></li> <li>• <b>Submit tags for inter/intrachange for OH1 (Reduction of 75MW at XX:10)</b></li> <li>• <b>Submit ETSR tags if desired for OH1</b></li> </ul>

**BPA EIM Structured Scenario Worksheet: Actions**  
**Structured Scenario Name: Base**

Operating Hour (Entire Hour)	
<b>PRSC/Bulk Marketing</b>	<ul style="list-style-type: none"> <li>• Outages as need for OH</li> <li>• Update ETSR tags as needed for OH1</li> <li>• Submit Bids for OH2</li> <li>• Submit ETSR tag for OH2</li> <li>• Outages for PR as needed for OH1</li> </ul>
<b>EESC/Operations</b>	<ul style="list-style-type: none"> <li>• Receive and implement remainder of dispatches and operations for OH</li> <li>• Manage Outages and communicate to MO for OH</li> <li>• Receive and implement initial dispatches and operations for OH1</li> <li>• Update outages as needed for OH1</li> <li>• Implement schedule updates and communicate to MO as needed for OH1</li> <li>• Pull tags and populate Base Schedule for OH2</li> <li>• Update ETSR limits (&lt;= ETSR Tags) for OH2</li> <li>• Update outages and other transmission limits for OH2</li> <li>• Evaluate preliminary RS Tests for OH2</li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>• Update tags for as desired/directed for OH</li> <li>• Update tags as desired/directed for OH1</li> <li>• Submit tags for inter/intrachange for OH2</li> <li>• Submit ETSR tags if desired for OH2</li> </ul>

# Settlement Activities NPR1

		NPR1												
	Base	200												÷ 4
		-												
	FMM RTUC (15 min)	200	200	200	200									
		<b>X</b>												
	FMM LMP	\$25	\$27	\$30	\$35									
		<b>=</b>												÷ 12
64600	<b>FMM IIE</b>	\$0	\$0	\$0	\$0									
		-												
	RTD (5 min)	200	200	200	200	200	200	200	200	200	200	200		
		-												
	Metered Actuals	200	200	200	200	200	200	200	200	200	200	200		
		<b>X</b>												
	RTD LMP	\$22	\$22	\$22	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	
		<b>=</b>												
64700	RTD IIE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
64750	RTD UIE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

# Settlement Activities NPR2

		NPR2												
	Base	50												÷ 4
		-												
	FMM RTUC (15 min)	50	50	50	50									
		X												
	FMM LMP	\$25	\$27	\$30	\$35									
		=												
64600	<b>FMM IIE</b>	\$0	\$0	\$0	\$0									÷ 12
		-												
	RTD (5 min)	50	50	50	50	50	50	50	50	50	50	50	50	
		-												
	Metered Actuals	50	50	50	50	50	50	50	50	50	50	50	50	
		X												
	RTD LMP	\$22	\$22	\$22	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	
		=												
64700	<b>RTD IIE</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
64750	<b>RTD UIE</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

# Settlement Activities Interchange

	Base	500												÷ 4
		-												
	FMM RTUC (15 min)	500	500	500	500									
		X												
	FMM LMP	\$25	\$27	\$30	\$35									
		=												÷ 12
64600	<b>FMM IIE</b>	\$0	\$0	\$0	\$0									
		-												
	RTD (5 min)	500	500	500	500	425	425	425	425	425	425	425	425	
		-												
	Metered Actuals	500	500	500	500	425	425	425	425	425	425	425	425	
		X												
	RTD LMP	\$22	\$22	\$22	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	X (-1)
		=												
64700	<b>RTD IIE</b>	\$0	\$0	\$0	\$0	(\$156)	(\$156)	(\$156)	(\$156)	(\$156)	(\$156)	(\$156)	(\$156)	



# Settlement Activities PR1

	Base	1250												÷ 4
		-												
	FMM RTUC (15 min)	1250	1250	1250	1250									
		X												
	FMM LMP	\$22	\$22	\$23	\$25									
		=												÷ 12
64600	<b>FMM IIE</b>	\$0	\$0	\$0	\$0									
		-												
	RTD (5 min)	1250	1250	1250	1250	1175	1175	1175	1175	1175	1175	1175	1175	
		-												
	Metered Actuals	1250	1250	1225	1200	1175	1175	1175	1175	1175	1175	1175	1175	
		X												
	RTD LMP	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	
		=												
64700	<b>RTD IIE</b>	\$0	\$0	\$0	\$0	\$156	\$156	\$156	\$156	\$156	\$156	\$156	\$156	
64750	<b>RTD UIE</b>	\$0	\$0	\$52.08	\$104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

# Settlement Activities Load

Hourly Load Base Schedule	1000												
Submitted Hourly Load Value	994												
5-min Load Base Schedule	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	÷ 12
5 min Load "Metered Actuals"	994	994	994	994	994	994	994	994	994	994	994	994	
	-												
	X												
LAP	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	\$26	x (-1)
	=												
RTD UIE	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	(\$13)	

# Outcomes

- The EIM Entity ends up collecting ~\$1404 due to the reduction in exports.
  - Interchange for \$1248 and Load for \$156.
- The Participating Resource pay ~\$1404 for decrementing it's resource.
- On balance the market is revenue neutral.
- **NOTE** – This example is purposefully very simple to demonstrate basic concepts.

# Future Structured Scenarios

Scheduled for March, April and May will include:

- Slice Customers
- VERs (participating / non-participating)
- Self Supply

# Next Steps



# Next Steps

- Next meeting scheduled for **Wednesday March 13<sup>th</sup>** at the Rates Hearing Room. This will be an all-day meeting to discuss our first Table Top.
  - WebEx and Phone participation will be available
  - Agenda and materials will be distributed in advance via Tech Forum
- We welcome feedback on this meeting. Your comments will help shape future EIM Stakeholder Meetings, please email us at [techforum@bpa.gov](mailto:techforum@bpa.gov) and reference “EIM Stakeholder Meeting” in the subject. Comments are due by March 1<sup>st</sup> Friday.
- For more information on BPA’s EIM Stakeholder process and meetings please visit:  
<https://www.bpa.gov/Projects/Initiatives/EIM/Pages/Energy-Imbalance-Market.aspx>
- For more information on BPA’s Grid Modernization Initiative please visit:  
<https://www.bpa.gov/goto/GridModernization>

# Question and Answer Session



# Appendix



# Why is Unintended Dispatch Bad?

- Mitigation could negatively impact FCRPS dispatch during cold snap conditions.
- An example of potential changes to GCL’s dispatch is below.

