

WESTERN

EIIM



2022

IMPLEMENTATION WORKSHOP

April 27, 2021

INTRODUCTION AND ROADMAP

Michelle Cathcart, *Vice President of
Transmission System Operations*

Allie Mace, *Director of Grid Modernization*



SAFETY MOMENT



AGENDA

Time	Topic	Presenter
9:05 to 9:15 a.m.	Roadmap and Comment Review	Allie Mace Rachel Dibble
9:15 to 10:25 a.m.	EIM Customer Impact Summary	Roger Bentz Eric King Todd Kochheiser
10:25 to 10:35 a.m.	Break	
10:35 to 11:05 a.m.	VER Forecasting	Frank Puyleart Eric King
11:05 to 11:30 a.m.	Western EIM Governance Review Committee Update	Cathy Ehli
11:30 to 11:50 a.m.	Post Go Live EIM Reporting	Sarah Burczak
11:50 a.m. to noon	Open Question and Answer Session	

Five Phases to EIM Decision






- Exploration** July 2018–June 2019
- Implementation agreement** June–Sept. 2019
- Policy decisions** Oct. 2019–Oct. 2020
- BP-22 & TC-22** Dec. 2020–July 2021
- Close-out** Aug.–Sept. 2021

EIM PARTICIPATION PRINCIPLES

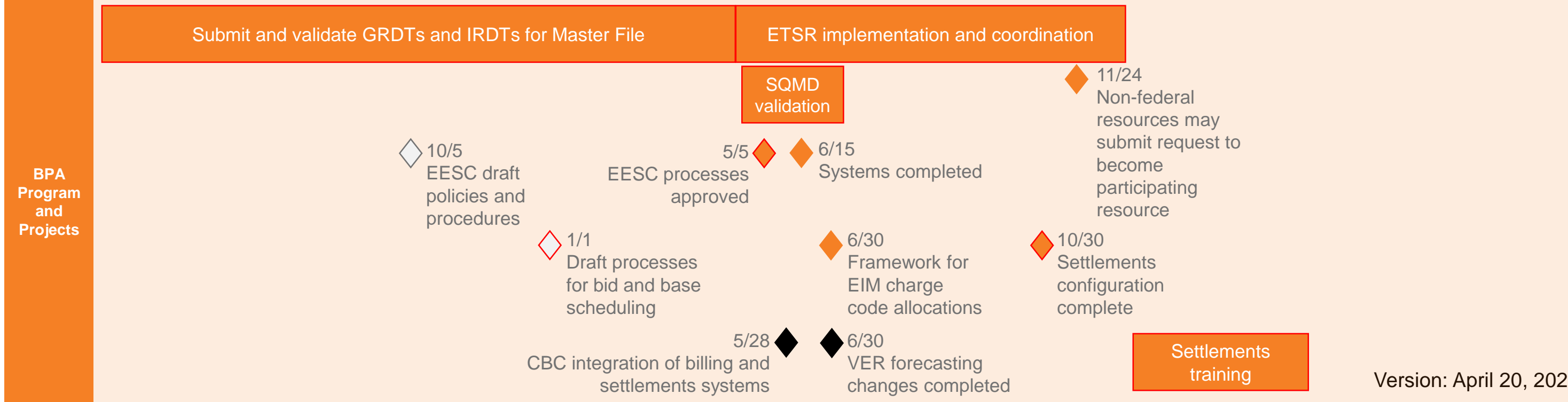
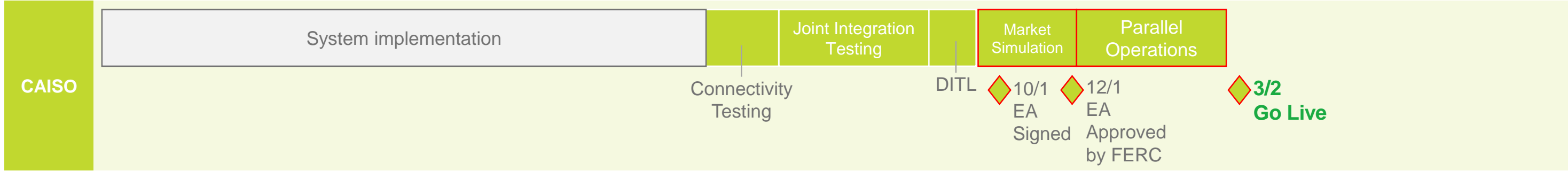
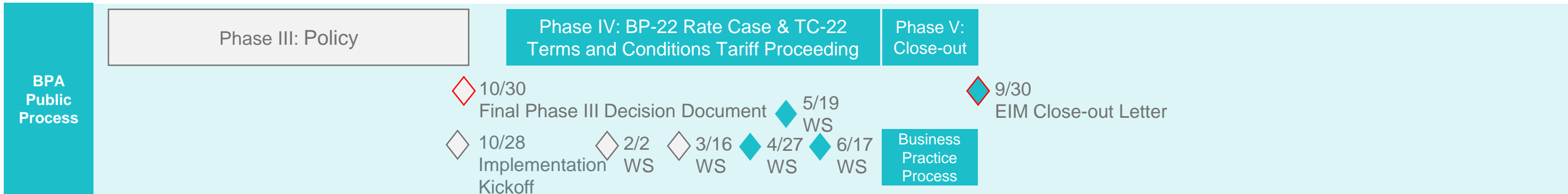
- 1 Bonneville's participation is consistent with its statutory, regulatory and contractual obligations.
- 2 Bonneville will maintain reliable delivery of power and transmission to its customers.
- 3 Bonneville's participation is discretionary and Bonneville retains its ability to effectively exit the market in the event participation is no longer consistent with these principles.
- 4 Bonneville's participation is consistent with a sound business rationale.
- 5 Bonneville's participation is consistent with the objectives of Bonneville's Strategic Plan.
- 6 Bonneville's evaluation of EIM participation includes transparent consideration of the commercial and operational impacts on its products and services.

MILESTONES KEY

	Critical path activity or milestone	These activities have a marginal room for error and delay and have the highest risk of impacting the go-live date.
	Partial EIM project milestones	These milestones represent a cross-project coordination point that is critical to the EIM program.
	Completed activity or milestone	These activities have been completed.

ACRONYMS IN THE ROADMAP	
CBC	Customer Billing Center Replacement
DITL	Day in The Life (CAISO)
EA	EIM Entity Agreement
EESC	EIM Entity Scheduling Coordinator
ETSR	Energy Transfer System Resource
GRDT	Generator Resource Data Template
IRDT	Intertie Resource Data Template
PR	Participating Resource
SQMD	Settlement Quality Meter Data
VER	Variable Energy Resources
WS	Workshop
Additional resource: CAISO's Glossary	

BPA EIM INTEGRATED PROGRAM ROADMAP



COMMENT REVIEW

Rachel Dibble, *Director of Market Initiatives*



COMMENTS

Topic	Comment Summary	BPA Response
EIM Customer Impact Summary	<ul style="list-style-type: none"> • Appreciation for EIM Customer Impact Summary and encourage to continue including in future workshops. • Include March 16 topics on potential EIM emissions and Phase V to the summary document. 	<ul style="list-style-type: none"> • BPA will continue to work through the EIM Customer Impact Summary at future workshops with the goal to discuss all topics. • The March 16 workshop materials provide the best customer impact information available.
EIM Settlements	<ul style="list-style-type: none"> • Requests to address settlements prior to the June workshop and provide more frequent updates and draft bills. • Make test settlement data available as soon as possible (prior to January 2022). 	<ul style="list-style-type: none"> • BPA is unable to provide a settlements update prior to June due timing of project work. BPA will continue to provide updates as possible and remains committed to providing a settlements bill preview in the fall of 2021 prior to the formal settlements training in 2022.
EIM Testing	<ul style="list-style-type: none"> • Encourage BPA to work with customers to develop a framework for customer to participate in CAISO readiness “programs.” 	<ul style="list-style-type: none"> • BPA is finalizing its required testing plan for future phases which is where BPA would anticipate needing some customer involvement. At the June 17 workshop, the testing team will provide an update on what testing options may be available to customers.

COMMENTS

Topic	Comment Summary	BPA Response
EIM Training	<ul style="list-style-type: none"> Clarify whether settlements will be the only area of training or if additional opportunities will be offered. 	<ul style="list-style-type: none"> At this point in time, BPA intends settlements to be the only area of training. CAISO computer-based trainings and BPA resources provided in the Feb. 2 workshop should help customers understand EIM. If there are specific areas of training that you believe need to be supported, please provide them in written feedback.
GHG Accounting	<ul style="list-style-type: none"> Advocate for pursuing a fix for EIM GHG accounting independent of EDAM. Commit to regular check-ins on this topic to report out on BPA's participation. 	<ul style="list-style-type: none"> BPA will advocate for a fix to EIM GHG accounting; however, BPA does not believe that pursuing a separate stakeholder initiative is the right path at this point in time and would recommend pursuing this fix through the existing EDAM initiative. ACS factor is public information on CARB's website provided annually. Bonneville will commit to providing updates on its ACS factor as it is updated at the following upcoming QBR.

COMMENTS

Topic	Comment Summary	BPA Response
Post go live reporting	<ul style="list-style-type: none"> Commit to post go live EIM reporting. 	<ul style="list-style-type: none"> BPA is planning to address this topic at the April 27 workshop.
Post-Phase V Implementation Workshops	<ul style="list-style-type: none"> Commit to additional EIM implementation workshops in the fall if it decides to join the EIM. 	<ul style="list-style-type: none"> BPA is willing to conduct additional workshops in the fall if it decides to join the EIM. These workshops would include the settlements bill review.
VER Forecasting	<ul style="list-style-type: none"> Provide more details on VER forecasting. Provide opportunity for customer input on VER forecasting changes. 	<ul style="list-style-type: none"> BPA plans to address the VER forecasting change at the April 27 workshops. Expected EIM impacts to VER customers were discussed at the March 16 workshop and included in the EIM Customer Impact Summary.

COMMENTS

Topic	Comment Summary	BPA Response
CAISO Stakeholder Initiatives	Discuss issues arising from Summer Readiness and other CAISO public processes and assess risks in final letter to the region.	<ul style="list-style-type: none"> • BPA intends to address these issues and evaluation of the risk in the Phase V close-out letter.
CAISO Stakeholder Initiatives	Review active initiatives (including resource sufficiency) and BPA’s comments on policy changes and how potential outcomes could impact BPA decision on EIM participation.	<ul style="list-style-type: none"> • Impact on BPA’s EIM decision will be documented in the Phase V close-out letter.
CAISO Governance	Review proposed changes to the EIM governance structure.	<ul style="list-style-type: none"> • BPA is addressing this topic at the April 27 workshop.
SPP Markets+	Evaluate additional market alternatives in Phase V.	<ul style="list-style-type: none"> • SPP Markets+ is a concept. It is not a proposal that can be evaluated. • BPA is engaging with SPP to assist in development of a proposal that addresses our unique considerations. • BPA supports SPP’s market development efforts and believes alternatives and competition in market design options is good for our customers and the region. • Operational experience gained in Western EIM puts BPA in a better position to evaluate potential future options.

COMMENTS

Topic	Comment Summary	BPA Response
Business Case	Evaluation of whether the E3 cost/benefit analysis needs to be updated. Request for more time to evaluate business case updates.	<ul style="list-style-type: none"> • BPA plans to address this topic at the May and June workshops. • BPA intends to include decisions on business case issues in Phase V close-out letter.
Business Case	Incorporate changes in expected capacity deficits into the EIM business case.	<ul style="list-style-type: none"> • BPA is an active participant in the NWPP RA program development to address future capacity concerns. The EIM is an energy only market and our analysis addresses EIM value, not capacity value.
Business Case	BPA should scope alternative business case analysis and share with customers in public process.	<ul style="list-style-type: none"> • E3 is the industry standard EIM benefits analysis. BPA will not pursue alternative analyses.

RESPONSES

Topic	Comment Summary	BPA Response
GHG Accounting	Did this analysis include the potential for additional “deeming” of resources as dispatched to serve California load when they were already included in BPA’s base schedules to meet load served by BPA?	Yes. The MW quantity that can be deemed delivered to California is limited to the MW value between the base schedules and the upper economic limit (i.e. the headroom). Because our analysis assumed energy neutrality, along with the assumption that the headroom is always fully dispatched, the analysis forced the quantity of purchases to equal the headroom.
GHG Accounting	If this analysis is a “worst case” for impacts to BPA’s single system mix, does that mean it is also a “best case” from a perspective of the anticipated revenues (due to the high level of dispatches assumed)?	<p>It’s a worse case from the perspective that it maximizes the potential purchases from the EIM given the assumptions of energy neutrality forcing the purchases to equal the headroom, which is the maximum that could be “deemed delivered” to CA. When energy is “deemed delivered” to CA, the ACS factor is only impacted when the headroom is not dispatched, since that would assume energy from the base schedule is “deemed delivered” to CA and assumed to be backfilled by unspecified EIM imports.</p> <p>The business case employed a variety of constraints and adjustments to ensure a reasonable estimate of expected benefits from sales in the EIM. Absent these constraints, a best case of revenues would have been calculated however BPA determined these constraints were reasonable in order realistically estimate expected benefits.</p>

RESPONSES

Topic	Comment Summary	BPA Response
GHG Accounting	How would changes in the premium received through the GHG adder impact this analysis? Does BPA anticipate any changes in this premium as participation in the EIM expands?	Changes in the premium received through the GHG shadow price will not have a negative impact on BPA, only a neutral or positive impact. At a minimum, BPA will recover its carbon compliance costs since the GHG shadow price will always be equal to or greater than BPA's carbon obligation when BPA resources are deemed delivered to CA. Increases in the GHG shadow price will have a positive impact on BPA. BPA will continue to track changes in the premium and evaluate its willingness to be deemed delivered to CA accordingly.
GHG Accounting	What is the confidence level of the results of this study? Does this analysis adequately cover the range of risk for impacts to BPA's system mix? If this analysis does not cover the full range or risk, which risks are not being modeled and how might those be mitigated by BPA?	Based on the information we have to date, we believe we looked at an adequate range of potential risks and impacts that could occur in actual operations. BPA will monitor and mitigate risks through its voluntary participation in the market and make adjustments as needed. Potential risks include WA/OR carbon legislation, WA CETA rulemaking, and material changes to CA GHG premiums.

RESPONSES

Topic	Comment Summary	BPA Response
EIM Scheduling Timelines	If the EESC makes changes to Power Services' base schedule after T-57, would Power Services incur any EIM settlement impacts due to the schedule change?	<p>No. The EESC may make changes to base schedules between T-57 and T-40 to address reliability issues, the needs of the BA, and to potentially pass the resource sufficiency test. These type of requested changes do not incur imbalance charges.</p> <p>All other changes made by Power Services to its generation, interchange, or intrachange schedules after T-57 would incur Instructed Imbalance Energy (IIE) and/or Uninstructed Imbalance Energy (UIE), as with any other transmission customer.</p>
EIM Scheduling Timelines	Will BPA use values in CDE to populate BSAP?	For behind-the meter resources who do not use eTags, BPA will use values submitted to CDE to populate BSAP at T-77 and T-57. For resources who use eTags, BPA will use the summation of eTags for the resource to populate BSAP.

RESPONSES

Topic	Comment Summary	BPA Response
EIM Settlements	What is the dispute resolution timing for settlements?	The dispute resolution timing will be outlined in the business practice. More information on the timelines will be provided in the April 27 workshop.
EIM Settlements	Requests that BPA consider making the data available via an Application Programming Interface (API) to facilitate automated integration into customers' systems for processing and validation.	Thank you for the feedback. BPA will evaluate if this is possible.
EIM Settlements	Request that bill include subtotals for load, for interchange, for each non-participating resource, and for each intrachange element.	Bills will not include sub-totals; however, the weekly data will provide the sub-total breakdown. The team is working to provide monthly sub-totals in the detailed data in addition to the weekly amounts.
EIM Settlements	Request that multiple tables not be combined on the same worksheet in the detailed settlement statement.	The team is working to implement this request.

RESPONSES

Topic	Comment Summary	BPA Response
EIM Settlements	Request that resettlement info be provided with the same granularity as original settlements.	The team is planning to meet this request.
EIM Settlements	If you have more than one NPR, will they be separated out in the detailed document?	Yes.
EIM Settlements	For interchange data, would there be a way to associate tag with detailed data?	The team is looking at how to include the associated tag in the detailed data but it will depend on technical limitations. Interchange data will be provided for each interchange point in the interchange tab.
EIM Settlements	If the bill shows the change between previous and current values, will the detailed data show what has changed as well?	The team anticipates providing a summary page in the detailed data and is looking at how changes may be represented on that.

RESPONSES

Topic	Comment Summary	BPA Response
VER Forecasting	What are the VER forecast time stamps? Please provide all advisory schedule timelines and committed scheduled timelines.	The table on Slide 36 is the current expectation of the VER forecast time stamp and schedules, based on a 5-min update frequency sent to VER customers. If BPA opts for a 15-min update frequency, the VER Forecast produced at T-45 would move to a VER Forecast produced at T-40.
VER Forecasting	If a customer does not submit a schedule by T-77 for a VER, what are the ramifications?	The biggest impact would be to the VER if they are a participating resource. PR's bids are submitted by the T-75 cutoff and finalized at that time. After T-75, base schedules for the VER can be updated but not the bids. For all types of VERs, the resource sufficiency check at T-75 would assume 0 MW for the VER, which could impact actions the EESC and others take in preparation for the T-55 RS check. Additionally, the 0 MW assumption at T-75 for the VER could drive price volatility in the market between the T-75 and T-55 cutoffs, which would be reflected in fifteen minute market pricing.

RESPONSES

Topic	Comment Summary	BPA Response
VER Forecasting	Can you please confirm that the committed forecast for VERs in which intentional deviations will apply will be provided between T-70 and T-65?	Yes. The VER forecast at T-70 will be used for the intentional deviation penalty check and should be posted minimally for VER customers between T-70 and T-65. If BPA opts for a 15-min update frequency on the VER forecasts communication to VER customers, the T-70 vintage forecast would be posted from T-70 to T-55. Note: This would not change the financial binding deadline of T-57, but rather post the forecast for a longer period of time.
VER Forecasting	Can you please confirm when this new committed forecast for VERs will be implemented? Would the new methodology go into effect Oct. 1, 2021?	See table on slide 36. Starting Oct. 1, 2021, VERs will need to use the hourly VER forecast supplied by BPA. However, schedules can continue to be updated till T-20 until Nov. 24, 2021, seven days prior to BPA's parallel operations testing begins.
VER Forecasting	What is the source for base schedules for VER forecasts? CDE or e-tags?	Both. For behind-the-meter VER resources, who do not use eTags, BPA will use values submitted to CDE to populate base schedules in BSAP at T-77 and T-57. For VER resources who use eTags, BPA will use the summation of eTags for the resource to populate BSAP on the same timeline.

EIM CUSTOMER IMPACT SUMMARY

Roger Bentz, *EIM Program Manager*

Eric King, *Electrical Engineer*

Todd Kochheiser, *Electrical Engineer*



EIM CUSTOMER IMPACT SUMMARY POSTED

- The *EIM Customer Impact Summary* documents what is and is not changing for customers. It also provides whether a final decision has been made and where that decision has been or will be made.
- This document will continue to be updated as information is available and decisions are finalized.
- At workshops, specific items from the summary will be discussed with an opportunity for questions.

GENERATORS IN NETWORK MODEL TO BE MODELED IN EIM

Objective: The EIM awards and imbalance settlements are for the entire EIM footprint’s load and include all generation modeled in the full network model. Bonneville typically models resources larger than 3 megawatts. BPA includes all of these modeled generators when calculating real-time and after-the-fact BAA load actual (generation – interchange), regardless of if they are in front of or behind the meter. For generators that don’t submit e-Tags, generation estimates via CDE are used.

Analysis: The BPA BAA has resources that meet the 3 MW threshold that are “behind the meter” today and not scheduled (only estimated). Because these resources are included in the network model, will be included in the EIM power/balance solutions, and result in EIM settlements, it is necessary that these resources be included in BPA’s market model for EIM.

Customer Impact

Resources meeting this criteria will be included in the EIM market model and will required to submit schedules/forecasts either via e-tags or CDE.

Other than timing requirements for scheduling and imbalance settlements, this is no different than today’s scheduling or estimating requirements.

Source

Phase III Workshop, draft tariff

Status of decision

Pending TC-22, BP-22

NON-FEDERAL PARTICIPATING RESOURCE – REQUESTS

Objective: The EIM and resulting solutions benefit from increasing the supply of market-dispatchable resources. Participating in the EIM also offers additional marketing opportunities and benefits to participating generator owners and operators.

Analysis: EIM participation requires operational and technical modifications and agreements with the CAISO in order to submit bids and receive settlements. Non-federal generators located in the BPA balancing authority area will have the ability to participate in the EIM. BPA is in favor of additional participating resources and has decided to follow a request process that is consistent with other regional EIM entities.

Customer Impact

Bonneville will accept applications for non-federal resource participation starting seven days prior to BPA’s parallel operations testing period.

BPA will make available to interested parties an inventory of activities and actions that are required to enable customers to meet the requirements of participating resources.

The application process will include a 45-day to six-month assessment period to evaluate the application.

This process is intended to verify that the necessary systems and capabilities to participate as a participating resource are in place.

Source

EIM Phase III Final Decision Document, draft tariff

Status of decision

Pending TC-22

NON-FEDERAL PARTICIPATING RESOURCE – SERVICE AGREEMENT

Objective: Determine what type of service agreement is needed in order to allow a non-federal resource to elect to be a participating resource in the EIM while ensuring they are subject to the terms of the BPA tariff.

Analysis: Current EIM entities have adopted tariff language that requires participating resources to have either a Network Integration Transmission Service agreement, a firm Point-to-Point enabling agreement or a non-firm enabling agreement with the transmission provider associated with the EIM entity. In practice, the other EIM entities are using their non-firm enabling agreement for EIM participating resources not taking transmission service. BPA’s PTP service agreement does not distinguish firm vs non-firm.

Customer Impact
 Bonneville proposes to require participating resource’s to have a NT or PTP service agreement in place with BPA.

Source	Status of decision
7/28/20 Phase III Workshop	Pending TC-22

RESOURCE SUFFICIENCY SUB-ALLOCATION

Objective: In order to fully participate in the EIM, the BPA balancing authority area as a whole needs to pass the EIM resource sufficiency evaluation ahead of each operating hour.

Analysis: Since the Bonneville BAA includes a substantial amount of independent load serving entities and third party owned/operated generation, passing the RS tests each hour is partly dependent on how accurately those entities schedule. Consideration was given as to whether to allocate a share of the RS obligations to those parties. There is no precedence for this and the policy could be complex. BPA has structures in place to pass the RS tests aside from the balancing test, and the over/under scheduling penalty provides motivation for all LSEs to submit balanced schedules.

Customer Impact

Bonneville will not adopt any sub-balancing authority area RS scheduling policies for the start of EIM participation.

Source

EIM Phase III Final Decision Document

Status of decision

Final

SETTLEMENTS – DISPUTES WITH THE MARKET OPERATOR

Objective: Processes and procedures are needed to describe how customers can dispute EIM settlements charges with CAISO.

Analysis: EIM disputes between a BPA transmission customer (excluding PR issues) and the market operator (MO) must be communicated through Bonneville since the MO relationship is with Bonneville as the EIM entity and not with BPA's transmission or interconnection customers. The process for these disputes must adhere to the MO tariff and must allow sufficient time for BPA settlements analysts to digest the concern and properly convey the issue to the CAISO. To evaluate disputes, the BPA EIM entity must be able to identify the item that is being questioned in the settlement statement.

Customer Impact:

If a dispute arises regarding an MO charge or payment to the BPA EIM entity that is subsequently allocated a transmission or interconnection customer and they wish to raise a dispute with the MO, the BPA EIM entity proposes to file the dispute on behalf of the customer by the 92nd business day (T+92B) following the day containing the disputed settlement.

BPA proposes to require the customer to provide notice to the BPA EIM entity of its desire to initiate a dispute by e-mail that includes detailed information about the nature of the dispute at least 7 business days prior to the MO's T+92B deadline.

BPA will provide notice to all transmission customers via OASIS posting, both when dispute is submitted and also when the issue is resolved.

Source

8/25/20 Phase III Workshop

Status of decision

Pending TC-22, EIM Business Practice

SETTLEMENTS – DISPUTES WITH BPA

Objective: Processes will be provided for customers to dispute BPA’s sub-allocation of EIM charges.

Analysis: Bonneville supports a robust and thoughtful dispute resolution process and indeed understands that there is substantial detail associated with the sub-allocations data, systems and processes. To evaluate disputes, the BPA EIM entity must be able to identify the item that is being questioned in the settlement statement.

Customer Impact:

Disputes involving settlement statements between the BPA EIM entity and a transmission customer or interconnection customer are proposed to be resolved in accordance with the dispute resolution process set forth in BPA’s OATT and Business Practices.

Notice of the dispute will be initiated through the customer’s Transmission Account Executive and must include detailed information about the nature of the dispute.

Source

8/25/20 Phase III Workshop

Status of decision

Pending TC-22, EIM Business Practice

SETTLEMENTS – EI/GI BANDS

Objective: BPA currently uses various mechanisms to incentivize proper scheduling behavior including defining energy imbalance and generation imbalance schedule performance bands with settlement implications.

Analysis: BPA proposes to rely on sub-allocation of EIM codes to manage EI/GI since this aligns with other EIM entities. This approach was also identified because it removes price index risk. Adopting this approach also reduces the impact of transitioning to the EIM schedule timelines. The charges/credits associated with the EIM imbalance charge codes provide incentive for customers to schedule accurately.

Customer Impact:

The EI/GI deviation bands are proposed to not be applied for time frames when BPA is participating in the EIM.

The EI/GI deviation bands will be maintained for time periods when BPA is not participating in the EIM.

Source

9/29/20 Phase III Workshop

Status of decision

Pending BP-22

TRANSFER SERVICE COSTS

Objective: BPA currently incurs EIM uninstructed imbalance energy, instructed imbalance energy and neutrality charges for transfer services customers.

Analysis: BPA currently treats EIM charge code costs/credits (UIE, IIE, neutrality) incurred for transfer service for load following customers as a transfer service cost in the Composite Cost Pool. For Slice transfer service customers, BPA directly assigns UIE and IIE and includes neutrality charges/credits for Slice customers served by transfer service as transfer service cost in the Composite Cost Pool. Evaluation suggests the best approach is to seek EIM charge code comparability for transfer customers.

Customer Impact:

Load Following and Slice transfer customers should receive the same type of charges that Load Following and Slice customers would receive on BPAT's system.

Note: This would not be the same amount of charge, but the same type of charge.

Source

8/26/20 Phase III Workshop

Status of decision

Pending BP-22

TOPICS COVERED IN WORKSHOPS TO DATE

- ✓ Metering Requirements
- ✓ Settlements Processes
- ✓ Settlement Sub-allocation
- ✓ Losses for EIM transfers
- ✓ VER Scheduling
- ✓ Scheduling Timing
- ✓ Intentional Deviation
- ✓ Persistent Deviation
- ✓ Participating Resources
- ✓ Generators in EIM
- ✓ Resource Sufficiency
- ✓ Transfer Service Costs
 - Energy Imbalance For Load
 - Energy Imbalance For Generation
 - Over / Under Scheduling Charges

VARIABLE ENERGY RESOURCE FORECASTING

Frank Puyleart, *Electrical Engineer*

Eric King, *Electrical Engineer*



VER FORECASTING IN THE EIM

- Granularity being forecasted by BPA's Variable Energy Resource forecasting vendor will be both hourly and 5-min.
 - The EIM derives 15-min forecasts as an average of three 5-min forecasts.
- Frequency of forecast update is increasing to every 5-min versus once per hour today.
 - BPA will post the forecast for 5-min before the next update.
 - For example, the T-70 vintage forecast will be posted from T-70 to T-65 for customers to retrieve.

VER FORECASTING IN THE EIM

- Hourly forecasts of concern in the EIM:
 - Day ahead at 9:35 a.m. for 10 a.m. DA draft tag/gen estimate submittal.
 - T-85 forecast for T-77 draft eTag/gen estimate submittal.
 - T-70 forecast for T-57 final eTag/gen estimate submittal.
 - BPA's **Intentional Deviation Measurement Value**
 - T-85 and T-70 driven by when the fifteen minute market runs.

PROPOSED TIMELINES IN BP-22 RATE PERIOD

VER Scheduling Time Lines				
	VER Forecast Produced @			
	DA - 9:35AM	T-85	T-70	T-45
Start of BP-22 10/1/2021	N/A	Draft @ T-77	Draft @ T-57	Final @ T-20
7 Days prior to Parallel Ops 11/24/2021	Draft @ 10 AM	Draft @ T-77	Final @ T-57	N/A
7 Days prior to Go Live 2/23/2022	Draft @ 10 AM	Draft @ T-77	Final @ T-57	N/A
	Requested	Required		

VER FORECASTING DELIVERY

- Delivery of forecasts in the EIM
 - 5-min forecasts delivered to CAISO and BPA.
 - Binding 5-min VER dispatches will be set using the CAISO persistence option.
 - CAISO persistence option is straight persistence for wind and a tuned persistence model for solar.
 - Binding/advisory FMMs and advisory 5-min and some exclusions* of binding 5-min VER dispatches utilize the 5-min forecast.
 - *Periods of manual dispatch, market errors, market awards for PR VER, etc.
 - Hourly forecasts go to BPA, then sent to customers.
 - CAISO uses the hourly base schedules submitted by the EESC/PRSC into BSAP as the expected hourly output of VERs.

VER FORECASTING DELIVERY

- Delivery mechanism for VER forecast system.
 - BPA's current plan is to provide an API for customers to retrieve their forecast.
 - Differs from today where BPA pushes data to a customer's API.
 - Reduces work of standing up and testing an API for each customer.
 - Reduces security risks as only BPA needs to allow inbound connections.
 - Intent is to provide a more modern REST API instead of a SOAP API.
- Timeline for changes to VER forecast system (TENTATIVE)
 - API specifications defined by end of May.*
 - Test the API endpoint by end of June.*
 - Production API endpoint by end of August.*

**More precise timelines will be communicated as they are known.*

WESTERN EIM GOVERNANCE UPDATE

Cathy Ehli, *Senior Project Manager*



CURRENT GOVERNANCE STRUCTURE

- CAISO Board of Governors (BOG)
 - Five members appointed by California Governor.
 - This is different from typical independent RTO governance.
 - Has ultimate approval authority over all issues.
- EIM Governing Board (GB)
 - Five members selected by stakeholder group. Members must be independent from market participants.
 - BOG delegates certain authority to GB.

CURRENT GOVERNANCE STRUCTURE

Current authority delegated from BOG to EIM GB:

- **Primary Authority**
 - GB has “primary authority” over EIM-specific issues, and generally applicable issues where the EIM is the “primary driver.”
 - These issues go first to GB for approval, and then to the BOG consent agenda. BOG can either approve or remand to the GB.
- **Advisory Authority**
 - GB has “advisory authority” over other generally applicable issues.
 - These issues go to BOG for approval, and GB is authorized to provide an advisory opinion for the BOG’s consideration.
- CAISO staff determines the category of authority early in the stakeholder process and takes comments on their determination.

CURRENT GOVERNANCE STRUCTURE

Other EIM Governance Components:

- **Regional Issues Forum**
 - Stakeholder organization with members representing specific sectors.
 - Provides a forum to discuss EIM issues, but charter bars the RIF from discussing issues currently in CAISO's stakeholder processes.
 - The RIF has been somewhat informal, and has not historically provided significant substantive input to the GB.
- **Body of State Regulators**
 - Members are state regulators, one from each state in which the EIM operates.
 - The BOSR operates independently and can provide advice to the GB, but has generally been used to educate the BOSR members about the EIM.
- **Department of Market Monitoring**
 - Investigates irregular market conduct and reports to the BOG, but generally has not focused on the EIM.
- **Market Surveillance Committee**
 - Independent market rule advisor.

BPA POSITION ON GOVERNANCE IN EIM POLICY ROD

- The 2019 EIM Policy ROD included a full analysis of the governance structure and concluded that, while it could be improved, “[t]he current **EIM governance structure is not a barrier to Bonneville joining the EIM.**”
- The ROD also noted that Bonneville would continue to be fully engaged in the CAISO’s EIM governance review stakeholder process to seek improvements.

GRC PROCESS

- The original 2015 Charter for EIM Governance called for a review of the EIM governance structure five years after the start of the EIM to consider “accumulated experience and changed circumstances.”
- The Governance Review Committee was formed in Q2 of 2020.
 - The GRC was charged with a full review of the EIM governance structure in view of market expansion, as well as considering appropriate changes for a potential EDAM.
 - The GRC is made up of 14 representatives from across the EIM footprint (including California).
 - Suzanne Cooper from BPA is an active member, and Therese Hampton from PGP is the chair.
- The GRC took multiple rounds of comments in the process of developing a comprehensive straw proposal.
- The GRC’s Final Proposal will go to the BOG and EIM GB for joint consideration.
 - If both bodies approve the proposal, the recommendations are codified in governing documents and subject to the EIM Governing Body’s advisory input and Board approval.

GRC PROPOSALS

The GRC's draft Proposal consisted of six parts.

1. Delegation of authority
2. Selection of EIM GB Members
3. EIM GB Meetings and Engagement with Stakeholders
4. Other Potential Areas for EIM GB Involvement
 - Annual Policy Initiative Roadmap
 - Department of Market Monitoring, Market Surveillance Committee, Governing Body Market Expert
 - Funding Technical Assistance for Body of State Regulators
5. Governing Body Mission Statement
6. Other Topics

GRC PROPOSALS CONT.

- Parts 2 through 6 are generally supported by stakeholders. To BPA, significant improvements include:
 - Part 2 takes steps to ensure a diverse EIM GB by establishing multiple facets of diversity, including perspectives based on experience.
 - Part 3 allows RIF to discuss current stakeholder initiatives, and formalizes RIF's direct engagement to advise the EIM GB (and BOG, assuming Joint Authority (Part 1) is ultimately adopted).
 - Part 4 provides for a Market Expert to support the EIM GB.

GRC PROPOSALS CONT.

- Part 1 is controversial.
 - Most all stakeholders outside of California strongly support moving to Joint Authority.
 - California IOUs and the CPUC oppose a change to the delegation of authority. Some suggest waiting until more is known about an EDAM.
- Joint Authority would apply to all issues relevant to the real-time market. The GB and BOG would decide these issues in joint session, with specific dispute rules if the two governing bodies disagreed.

JOINT AUTHORITY IN CONTEXT

- The driver behind joint authority is to move EIM governance closer to independence and to establish the EIM and parties outside of California on a more equal footing with the CAISOs other market concerns.
- CAISO legal asserts the BOG must retain (1) the ability to modify or revoke any delegation of authority, and (2) some form of concurring role regarding changes to market rules.
 - As a corporate board of directors, the BOG must retain ultimate supervision of all CAISO activities.
 - The CAISO's particular tax-exempt status as a "supporting organization" requires California supervision and control.
- Stakeholders asked about potential conflicts. CAISO legal responded:
 - Undue discrimination against a segment of market participants would violate the Federal Power Act.
 - As a practical matter, unfair treatment would cause EIM participants to move to competing markets.
 - It is theoretically possible the obligation to California consumers could lead the BOG to revoke a delegation of authority to EIM GB. However, that would require a finding that there is no longer a viable argument that the EIM promotes the reliable and efficient use of the grid in California.
- Thus, truly independent governance is not possible under California law. However, Joint Authority would change the dynamic to be more collaborative and give EIM participants and other stakeholders more confidence in the governance structure.

GRC MOVING FORWARD

- The GRC is proposing to move forward with Parts 2-6 of its proposal, submitting them for GB and BOG approval in Q2 2021.
- The GRC will continue to have an ongoing process on Part 1 (delegation of authority), with a tentative plan to submit a proposal to the GB and BOG by Q4 CY 2021.
- While there are good improvements in Parts 2-6, the Joint Authority proposal is the more important component. It provides the best potential for increased independent governance without changing California laws.

POST GO LIVE EIM REPORTING

Sarah Burczak, *Stakeholder Engagement Lead*



BACKGROUND

- Requests in comments for BPA to commit to post go live reporting if BPA joins the EIM.
 - *In addition to the future topics already identified, PPC reiterates its request made during the TC/BP/EIM workshops that BPA develop a plan for regular reporting on its EIM participation to customers once it goes-live. In our previous comments, we have suggested that these reviews should be conducted quarterly to help BPA and customers understand the impacts of the agency's EIM participation, to ensure there are not unintended consequences, and to identify any areas where potential policy changes may be needed.*
 - *BPA's plans for post go-live reporting. We expect that customers will have an opportunity to help shape what will be included in this reporting, so more than one workshop session may be required on this topic.*

PROPOSED QUARTERLY REPORTING

- Add EIM reporting as a topic at the Quarterly Business Review Technical Workshop similar to the current grid modernization update. Report would include:
 - CAISO quarterly benefit metric.
 - Qualitative market updates on BPA's participation.

QUARTERLY METRICS

- CAISO Quarterly Benefit Report
 - Provides quarterly benefit for all EIM participants.
 - Report provides additional participation metrics which could be included over time.
- As participation matures, BPA would be open to exploring additional metrics to track participation.

QUALITATIVE MARKET UPDATES

- Provide quarterly updates on BPA's market participation and experience. Updates could include:
 - Updates on EIM projects after go-live.
 - How groups are adapting to EIM participation and highlight successes of processes and tools.
 - How a new market change or proposed initiative may impact EIM participation.

QUESTIONS?



COMMENTS

Please send your feedback to techforum@bpa.gov by Tuesday May 11.

Thank you for participating in today's workshop. For more information, visit www.bpa.gov/goto/eim.

