

Energy Imbalance Market (EIM)

BPA Transmission Business Practice

Version 5
TBD

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This Energy Imbalance Market (EIM) Business Practice sets forth the detailed processes and procedures necessary to comply with the provisions of the BPA Open Access Transmission Tariff (OATT) to implement participation in the EIM.

Unless otherwise expressly indicated herein, terms used in this business practice have the same meaning as set forth in the BPA OATT. Any provision of the BPA OATT that may have been summarized or repeated in this business practice is only to aid understanding. To the extent an inconsistency may exist between this business practice and the BPA OATT, the BPA OATT shall govern.

This business practice applies to all Transmission Customers and customers under Attachments L and N of the BPA OATT (GI Customers), as applicable with new and existing service agreements, as well as all Transmission Customers with legacy transmission agreements that expressly incorporate by reference the applicability of the BPA OATT. This business practice does not apply to General Transfer Agreement (GTA) Customers.

BPA Policy Reference

- [Open Access Transmission Tariff \(OATT\)](#): Schedule 4E; 9E; Attachment Q
- [Transmission Rate Schedules/Provisions](#): Transmission, Ancillary, and Control Area Service Rate Schedules

For more information, visit the [BPA Transmission Business Practices webpage](#) or submit questions to techforum@bpa.gov.

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A. Election Date

1. Application submittal date:
 - a. No sooner than seven (7) Calendar Days prior to the start of parallel operations with the CAISO Market Operator (MO), a resource that would like to register as a BPA EIM Participating Resource can submit a completed application consistent with Section B of this business practice.
 - b. Following the start of parallel operations, a resource that would like to register as a BPA EIM Participating Resource can submit a completed application consistent with Section B of this business practice at any time.
2. Application processing:
 - a. Once an applicant starts the application process to become a BPA EIM Participating Resource, BPA will work with the applicant and the MO to reach a mutually agreeable date when resource can become a BPA EIM Participating Resource and can start participating in the EIM, see Section B and Section C of this business practice.

B. EIM Participating Resource Application and Processing

1. Application form and deposit:
 - a. Contact information and form location.
 - i. Questions associated with the application and/or application submittal process may be emailed to the assigned Transmission Account Executive.
 - ii. The application to become a BPA EIM Participating Resource (“Participating Resource”) is located on the Transmission Business Practices [Forms webpage](#).
 - b. Submission of application and deposit.
 - i. To become a Participating Resource, an applicant must email a completed BPA EIM Participating Resource Application to the BPA EIM Entity (email address on application).
 - ii. Applicants submit a non-refundable processing deposit of \$2,500 to the BPA EIM Entity for each resource (submittal process identified on application).
2. Preparing to apply to be a Participating Resource:
 - a. A potential applicant to become a Participating Resource should notify their assigned Transmission Account Executive of their intent to apply.
 - i. A potential applicant intending to apply to become a Participating Resource must have associated transmission rights based on its Network Integration Transmission Service Agreement or be associated with a Service Agreement for Point-to-Point Transmission Service.
 - ii. If a potential applicant intending to apply to become a Participating Resource is in the process of entering an interconnection agreement with BPA for that resource or has an interconnection agreement, but has not

yet energized the facility, the potential applicant shall also inform its BPA interconnection point of contact of its intent to apply. BPA will then work with the potential applicant to determine the timing for submission of the application and deposit to become a Participating Resource.

- b. The BPA EIM Entity may schedule meetings with the potential applicant as necessary to discuss the technical details of the resource as outlined in greater detail in the BPA Technical Interconnection Standards available on the BPA [Interconnection webpage](#).
 - c. The BPA EIM Entity will provide an initial assessment of the options for the potential applicant to provide meter data to the MO as well as the potential applicant's election to perform the duties of either a Scheduling Coordinator Metered Entity ("SCME") or a CAISO Metered Entity ("CAISOME") as set forth by the MO. A CAISOME must accept and adopt certain technical requirements and equipment as specified by the MO. A SCME must work with the MO to adapt its own equipment, as necessary and including metering, to the MO's satisfaction with respect to meeting metering and other technical requirements. The BPA EIM Entity decision on role does not change or impact existing metering agreements with BPA.
 - d. If the potential applicant or the potential applicant's contracted third party, has elected to perform the duties of a SCME where BPA owns the required revenue meters and related telecommunications equipment located at the resource, the potential applicant or the SCME, must determine if they intend to elect to use the BPA-owned infrastructure to facilitate the BPA EIM Participating Resource Scheduling Coordinator's provision of settlement quality meter data to the MO and to BPA.
 - i. If the potential applicant intends to use BPA-owned infrastructure, the potential applicant will need to enter into a meter data services agreement with BPA to implement the election. Ahead of application submittal, the potential applicant and BPA will define the roles and responsibilities of the parties to facilitate the BPA EIM Participating Resource Scheduling Coordinator's provision of settlement quality meter data to the MO and to BPA, including meter data access through the BPA Customer Portal. The potential applicant may arrange meetings with BPA as necessary to discuss the details of any required agreements ahead of application submittal.
3. Application processing:
- a. Receipt of application.
 - i. Upon receipt of the completed application and processing deposit, the BPA EIM Entity will date-stamp and begin processing the application. The BPA EIM Entity will make reasonable efforts to acknowledge, by email, receipt of materials and information submitted by the applicant within five (5) Business Days of receipt. All notifications to the applicant will be sent to the contact designated in the application ("primary contact") to receive notices.
 - ii. While an application is pending processing or a certification, the resource that is the subject of the application shall be deemed a Non-Participating Resource.

- b. Application technical review period and extensions.
 - i. Upon receipt of the completed application, BPA will conduct a technical review to verify that the resource is eligible to participate in the EIM.
 - ii. Within 45 Calendar Days of the BPA EIM Entity's application receipt date-stamp, absent any extensions to the processing period as set forth below, the BPA EIM Entity will make a determination to accept or reject the application.
4. Technical review:
- a. 45 Calendar Day processing period.
 - i. During the 45 Calendar Day processing period, the BPA EIM Entity may schedule a meeting with the applicant, if needed, to discuss and review the technical details provided in the application including resource characteristics; metering and telemetry configuration; and network model representation.
 - ii. Additional meetings may be required to discuss specific characteristics of the applicant's resource. During this process the BPA EIM Entity will notify the applicant of any additional modifications to the resource that may be required to meet the BPA EIM Entity's and MO's standards for certification as a Participating Resource. The MO requirements for certification may be found in Section 29.4(e) and 4.5.1 of the MO's tariff. Upon mutual agreement between the parties of such modifications or upgrades, BPA will draft any necessary agreements to facilitate the implementation of the modifications or upgrades.
 - iii. If any of the applicant's submitted information changes at any time during the application process period, the applicant shall notify the BPA EIM Entity of such changes by email as soon as possible.
 - iv. Prior to the end of the 45 Calendar Day processing period, BPA may request additional information in order to attempt to resolve either any deficiencies in the application or any technical issues related to the resource(s).
 - b. Extension of the 45 Calendar Day processing period.
 - i. The BPA EIM Entity may, at its discretion, extend the 45 Calendar Day processing period as reasonably required to process any revised or updated information or to accommodate appropriate resolution of application or resource deficiencies. If the BPA EIM Entity determines a need to extend the 45 Calendar Day processing period, the BPA EIM Entity will make reasonable efforts to notify the applicant's primary contact by email of the extension prior to the end of the initial processing period except and unless the issue(s) that causes an extension arises within five (5) Business Days of the 45 Calendar Day processing period, in which case BPA will make the notification as promptly as practicable.
 - ii. An extension of the 45 Calendar Day processing period to allow time for resolution of application or resource deficiencies shall not exceed six (6) months from BPA EIM Entity's initial application receipt date-stamp. If the additional requested information is not provided or if the deficiencies are not resolved within that 6-month period, BPA shall deem the application

rejected and notify the applicant's designated contact specified in the application no later than five (5) Business Days following the date of the expiration of the six (6) month period.

- c. Application status notification.
 - i. Upon BPA's verification that any required resource modification and upgrades are complete and the resource meets BPA's standard for Participating Resource eligibility as specified in the BPA OATT, the BPA EIM Entity will notify the applicant's primary contact of acceptance or rejection of the application by email. If the application is accepted, the BPA EIM Entity will also notify the MO.
 - ii. If the application is rejected, the BPA EIM Entity will, in its notice to the applicant's primary contact, state the grounds for rejection.
 - 1. Upon the applicant's request, the BPA EIM Entity may provide guidance as to how the applicant may cure the grounds for rejection.
 - 2. Following a rejection, an applicant may re-apply and begin a new application process by re-submitting its application and submitting a new \$2,500 processing deposit.
- 5. Failure to complete any of the above requirements will result in an application rejection. The applicant may resubmit the application with a new \$2,500 processing deposit.

C. EIM Participating Resource Verification and Certification

1. Upon verification that the application to become a Participating Resource is approved, BPA will begin its certification process. The purpose of the certification process is to enable BPA to make a final determination that the resource meets BPA standards for Participating Resource certification as specified in the BPA OATT. If BPA requires additional modifications or upgrades, it will communicate those requirements by email to the resource's contact provided in the application.
2. During BPA's verification that the resource meets the BPA standards for Participating Resource eligibility as specified in the BPA OATT, BPA will require that the applicant demonstrate that the resource has met the MO's criteria to become a Participating Resource as set forth in the BPA OATT and that the applicant has executed the MO's EIM Participating Resource Agreement.
3. The applicant will need to demonstrate that they are qualified to become a BPA EIM Participating Resource Scheduling Coordinator and have executed the MO's Meter Service Agreement for Scheduling Coordinators, or retained the services of a MO-certified EIM Participating Resource Scheduling Coordinator that has executed the MO's Meter Service Agreement for Scheduling Coordinators.
4. Upon receiving confirmation from the MO of the completion of the enumerated requirements by the applicant, BPA will certify that the applicant has demonstrated that it has met all the requirements to become a Participating Resource and will notify both the MO and the applicant's primary contact by email that the applicant is certified. Upon certification, BPA will work with the applicant to establish a cut-over plan and effective date.

- a. BPA will coordinate and agree to a testing timeline and plan at the BPA EIM Participating Resource Scheduling Coordinator's discretion. The applicant will need to demonstrate that they have the ability to receive and implement the MO's Dispatch Instructions every five (5) minutes.
5. Change in applicant's information during certification process:
- a. If any of the applicant's submitted information changes at any time during the certification process, the applicant shall notify the BPA EIM Entity of such changes by email as soon as possible.
 - b. Upon certification and thereafter, pursuant to the BPA OATT, a certified Participating Resource shall notify the BPA EIM Entity of any material change in operating characteristics, metering, or data exchange information previously submitted as part of the application and certification processes. Notification must be provided to the BPA EIM Entity within 15 Calendar Days of such change in any information. The applicant shall re-submit its application along with a clear description of the information that has changed to the BPA EIM Entity by email.
 - c. The BPA EIM Entity will make reasonable efforts to send a notice of receipt of the updated information to the applicant's primary contact by email within five (5) Calendar Days of receiving the information. The BPA EIM Entity may schedule meetings or conference calls with the applicant as necessary to review the technical details provided in the updated application, and discuss how any changed technical details affect the technical requirements originally agreed to by the parties. The BPA EIM Entity will endeavor to obtain further mutual agreement between the parties as necessary thereafter.

D. Registration Data Submission and Updates

1. Participating Resource:
 - a. Initial registration.
 - i. A Participating Resource shall submit to the MO and to BPA its initial registration data as required by the MO according to the MO's process for EIM Participating Resource registration data submission.
 - ii. The Participating Resource shall deliver to the BPA EIM Entity by email a copy of its registration information submitted to the MO within five (5) Calendar Days of submitting the registration data to the MO.
 - b. Registration information updates.
 - i. A Participating Resource shall submit any changes to the initially submitted registration data to the MO in accordance with the MO's process for updating EIM Participating Resource registration data.
 - ii. The Participating Resource shall deliver to BPA by email a copy of its updated registration information submitted to the MO, within two (2) Business Days of submitting the updated registration data to the MO.
 - c. Modifications to operational characteristics.
 - i. The process to become a Participating Resource does not replace obligations to be evaluated by BPA for any resource changes, up to and

including evaluation through the generator interconnection process with a new request.

- ii. A Participating Resource must be accurately modeled in both the BPA EIM Entity's and the MO's network models.
- iii. Any modifications require a minimum of eight (8) months to implement network model updates prior to taking effect.
- iv. Email notification of planned modifications to the operational characteristics of a Participating Resource shall be given to the BPA EIM Entity a minimum of eight (8) months prior to the planned implementation, so that the BPA EIM Entity may make a determination as to whether the modifications require network model updates.
- v. Questions about what registration data are considered an operational characteristic of the resource should be directed to the assigned Transmission Account Executive by email.

2. Non-Participating Resource:

a. EIM implementation.

- i. For EIM implementation, the BPA EIM Entity Scheduling Coordinator (EESC) will complete initial registration and provide the MO with the information identified in the EIM Non-Participating Resource Data Template ("NPRDT") based on the current BPA network model for all resources currently in the BPA BAA.
- ii. Any changes to registered attributes or new resources after EIM Go-Live will need to follow the procedures outlined in this business practice.

b. Initial registration.

- i. A Non-Participating Resource not currently in the BPA network model, shall submit to BPA the information required by the MO. The Non-Participating Resource will complete the NPRDT, located on the Transmission Business Practices [Forms webpage](#), and submit the completed NPRDT to BPA by email.
- ii. BPA will make reasonable efforts to acknowledge receipt of the data within five (5) Calendar Days by replying to the Non-Participating Resource's email address by which the data was submitted. BPA will endeavor to coordinate with Non-Participating Resources to complete the NPRDT and with the MO as applicable and appropriate concerning the MO's technical requirements. BPA will also endeavor to reach mutually agreeable solutions with Non-Participating Resources to resolve issues related to the information required on the NPRDT. BPA will be responsible for submitting the registration data for all Non-Participating Resources to the MO consistent with the BPA OATT.

c. Registration information updates.

- i. Non-Participating Resources must submit to BPA any change in the submitted registration data. Non-Participating Resources shall submit any changes in registration data that do not modify the operational characteristics of the resource to BPA by completing and submitting a

- new NPRDT by email to the address used for the initial submission within 15 Calendar Days of the occurrence of such change.
- ii. BPA shall make best efforts to notify the Non-Participating Resource within five (5) Business Days of receipt of the change in registration data by replying to the resource's email message by which the changed data was submitted. BPA shall be responsible for submitting any changes in registration data for all Non-Participating Resources to the MO. Upon confirmation from the MO that the Non-Participating Resource's data has been updated, BPA shall promptly notify the resource by email of the confirmed update.
- d. Modification to operational characteristics.
 - i. Modification to the operational characteristics of a Non-Participating Resource must be accurately modeled in both the BPA and the MO's network models. Such modifications require a minimum of eight (8) months to implement network model updates prior to taking effect. Email notification to BPA of planned modifications to the operational characteristics of a Non-Participating Resource shall be given to BPA a minimum of eight (8) months prior to the planned implementation so that BPA may make a determination as to whether the modifications require network model updates. Questions about information on the NPRDT are operational characteristics of the resource should be directed to the assigned Transmission Account Executive by email.
3. New resource or aggregated resource:
 - a. New generation resources or aggregated resource within the BPA EIM Entity's BAA capable of producing 3 MW or greater, whether a Participating Resource or Non-Participating Resource, must be accurately modeled in both the BPA EIM Entity's and MO's network models. All required operational characteristics data of the resource must be submitted in accordance with the MO's network model deployment schedule a minimum of eight (8) months prior to energization. GI Customers with new generation resources interconnecting to BPA's BAA or integrating into BPA BAA will be notified of the operational characteristics required for modeling and the timing requirements during the interconnection process.
 4. Interconnecting to a transmission system not owned by BPA, but within the BPA BAA:
 - a. Customers interconnecting to transmission systems not owned by BPA, but within the BPA BAA shall at a minimum of one (1) year prior to energization, contact their assigned Transmission Account Executive by email and inquire as to the specific operational characteristics required for the new generation resource and as to the specific dates for which information must be submitted based on the MO's deployment schedule.
 5. BPA EIM Entity approval of Master File:
 - a. All new or modified Master File elements conveyed via Resource Data Templates (generation or intertie) must be coordinated with and approved by BPA EIM Entity, including activations dates.

E. Metering

1. Metering responsibility:
 - a. Pursuant to Section 4.1.4 of Attachment Q (Energy Imbalance Market) of the BPA OATT, the BPA EIM Entity must submit load, resource, and Interchange data to the MO in accordance with the format and timeframes required by the MO Tariff. To the extent that a Non-Participating Resource owns the meter or communications to the meter, the resource is responsible for maintaining accurate data and submitting this data to the BPA EIM Entity within five (5) Calendar Days after the operating day. In the processing of initial registration data under Section 4.1.4, Attachment Q of the BPA OATT, BPA will discuss the technical and physical characteristics of the resource-owned meter or communications to the meter and reach mutually agreeable solutions to resolve any issues related to meter data, access to meter data, and submission of meter data to BPA.
2. Requirements:
 - a. As the Local Regulatory Authority (LRA) the BPA EIM Entity must meet the standard requirements for metering and the BPA Technical Interconnection Standards available on the BPA [Interconnection webpage](#).
 - b. The BPA EIM Entity requires the Settlement Quality Meter Data (SQMD) Plan with an electrical one-line diagram of the resource showing meter location; instrument transformer location and information; voltage; etc., as required by the MO.

F. Forecast Data

1. Generation Forecast Data:
 - a. Pursuant to Section 4.2.4. of Attachment Q of the BPA OATT, generation Forecast Data (which is a component of the “EIM Base Schedule” referred to in the MO Tariff) for resources, for which Customers are required to submit such Forecast Data, shall consist of an hourly forecast of anticipated generation. Generation Forecast Data shall be submitted for each resource facility or each individual generating unit of the resource based on how the resource is represented in the network model.
 - i. Non-Participating Resources are represented in the network model based on the manner in which the Customer submitted the required information in the NPRDT for each resource and as described in BPA’s OATT Attachment Q, Section 4.
 - ii. Participating Resources are represented in the network model based on the Generator Resource Data Template (“GRDT”) submitted by the Customer to the MO.
 - iii. Customers shall submit anticipated hourly Forecast Data according to the timing and methods set forth in Section F.2 of this business practice. Generation Forecast Data must contain the anticipated hour output (in MW) of the resource facility or individual generating unit for the Operating Hour.

- iv. BPA will set Transmission Customer Base Schedules from Generation Estimates entered into CDE, and e-Tags submitted by Customers for Participating and Non-Participating Resources.
- v. BPA will use the e-Tag to determine the Base Schedule in the event a customer submits both Generation Estimates into CDE and an e-Tag.
- vi. If a Customer submits changes to its registration data under Section D.2 of this business practice, any generation Forecast Data submitted prior to the change in registration information must be resubmitted upon confirmation that the MO's Master File has been updated with the revised information.

2. Transmission Customer Base Schedule submission:

- a. The timing for Transmission Customer Base Schedule submission for the EIM is different than the timing for the e-Tag process as defined in the WECC Timing Requirements table in NERC INT-006-4 or its successors. Both apply to Customers.
- b. Customer shall submit Forecast Data on all resources, Interchange, and Intrachange to the BPA EIM Entity.
- c. Customers with (1) a Participating Resource; (2) a Non-Participating Resource; and/or (3) load within BPA's BAA shall:
 - i. Submit the initial hourly generation Forecast Data for each hour of the operating day seven (7) Calendar Days in advance; and
 - ii. Update the hourly generation Forecast Data at any time, but shall submit hourly generation Forecast Data no later than 1000 PPT the day before each operating day.
- d. Customers with (1) a Participating Resource; (2) a Non-Participating Resource; (3) load within BPA's BAA; and/or (4) that are wheeling through the BPA BAA shall:
 - i. Submit the proposed value to use for the final Transmission Customer Base Schedule for each resource no later than 77 minutes prior to each Operating Hour ("T-77"); and
 - ii. Have the ability to modify generation Forecast Data until 57 minutes prior to the Operating Hour ("T-57"). At T-57, the generation Forecast Data for the Operating Hour will be considered financially binding.
 - 1. Changes by Customers to their generation Forecast Data after "T-57" will be subject to imbalance charges. Submission of generation Forecast Data by T-57 is required to align with the timing requirements of the Interchange and Intrachange components of the Transmission Customer Base Schedule.
- e. If the Customer fails to submit an expected output value of the resource by T-57 for any individual Operating Hour, the default will be zero (0) MW for that Operating Hour. Should a Customer fail to e-Tag the expected value of its load for any individual Operating Hour, imbalance charges shall be applied.
- f. The BPA EIM Entity will submit all forwarded Generation Estimates entered into CDE and e-Tag information into the Base Schedule Aggregation Portal (BSAP) in

order for the information to be applied to the Transmission Customer Base Schedule. The BPA EIM Entity requires a minimum of two (2) minutes following the submission of Generation Estimate data and e-Tags to forward information into the BSAP. This includes Interchange transactions by Customers that have no generation or load and are wheeling through BPA's BAA. At T-57, the Transmission Customer Base Schedules for the Operating Hour will be considered financially binding and sent to BSAP.

- g. The following table illustrates the dates by which parties are required to submit Forecast Data.

Table 1 – Starting Dates to Submit Forecast Data

Financial Binding Scheduling Time Lines for all Parties in the BPA BAA			
NON-VARIABLE ENERGY RESOURCES (NON-VER)			
7 Days ¹ prior to Parallel Ops 11/24/2021	Draft @ 10 AM Day Ahead	Draft @ T-77	Draft @ T-57 Final @ T-20
7 Days ¹ prior to EIM Go-Live 4/26/2022	Draft @ 10 AM Day Ahead	Draft @ T-77	Final @ T-57
VARIABLE ENERGY RESOURCES (VER)			
	VER Forecast Produced @		
	DA - 9:35AM	T-85	T-70
7 Days ¹ prior to Parallel Ops 11/24/2021	Draft @ 10 AM Day Ahead	Draft @ T-77	Draft @ T-57 ² Final @ T-20
7 Days ¹ prior to EIM Go-Live 4/26/2022	Draft @ 10 AM Day Ahead	Draft @ T-77	Final @ T-57 ²
	Requested	Required	
¹ Calendar Days			
² Intentional Deviation Measurement Value shifts to T-70 Forecast on 11/24/21			

- h. In the event of a BSAP system failure that prohibits data exchange or communications between the MO and BPA, the MO's EIM Business Practice Manual provides for a recovery approach. Actions the MO may take include using a recent history in market operations to produce approximate, acceptable market results until the data is considered too old to produce reasonable market results. If the disruption is prolonged, the MO may isolate the affected BAA by freezing the net scheduled Interchange, the demand, and the dispatch at the last market solution. Such disruption is not expected to last longer than one operating day. Finally, the MO may suppress settlement statements for the affected BAA and/or use its administrative prices to settle imbalance energy.

- i. BPA will use these submissions to balance its BAA. BPA shall notify Customers of such BSAP system failure by posting a notification to BPA’s OASIS website. Further, BPA shall review settlements affected for the duration of the BSAP system failure to determine settlement impacts and shall submit formal settlement disputes to the MO as appropriate or as requested by Customer pursuant to Section 12 of the BPA OATT and Section H of this business practice.

- i. The following table identifies the schedule submissions by the appropriate method.

Table 2 – Basic Timing Requirements for the Submission of Forecast Data

Forecast Data Type	Method of Supplying Forecast Data	Initial Submission Deadline	Update Submission Deadline	Customer Proposed Final Submission Deadline	Final Submission Deadline
Generation Forecast Data	CDE or e-Tags	T-7 days	10 a.m. before Operating Day	T-77 minutes (e-Tags required for scheduling resources)	T-57 minutes (e-Tags required for scheduling resources)
Interchange & Intrachange Forecast Data (Customers with resources or load in BPA BAA)	e-Tags	T-7 days	10 a.m. before Operating Day	T-77 minutes	T-57 minutes
Interchange Forecast Data (Customers without resources or load in BPA BAA)	e-Tags	Not applicable	Not applicable	T-77 minutes	T-57 minutes

3. Load component of Transmission Customer Base Schedule:

- a. The BPA EIM Entity calculates the load component of the Transmission Customer Base Schedule as the sum of the Customer’s forecast generation, Interchange, and Intrachange.
 - i. For example, if a Customer submits a forecast of 10 MW generation, and Interchange export e-Tag of 4 MW, the resulting load component would be 6 MW (10 MW generation – 4 MW export = 6 MW load component).
- b. Customer with only load shall submit its Interchange and Intrachange via e-Tag, which is its Transmission Customer Base Schedule.
- c. If a Customer with load in the BPA BAA does not own any generation in BPA’s BAA, its resulting load component calculation (Transmission Customer Base Schedule) is the sum of the e-Tags in both approved and pending status at T-57 sinking at its load.

4. Customers with wheels, imports, or exports:

- a. Customers with a wheel, import or export shall submit Forecast Data; i.e., its e-Tag, including data on all generation and Intrachange within the BPA BAA and data on all Interchange.

5. Variable Energy Resource (VER) Five-Minute Forecast Data for Participating and Non-Participating VERs:
 - a. The BPA EIM Entity’s designated VER Forecasting Agent administering this service will produce additional generation Forecast Data for each VER resource and submit the data to the MO on the Customer’s behalf. This data shall include a rolling three (3) hour forecast of the anticipated resource output in MW with five (5) minute granularity updated every five (5) minutes.

6. Variable Energy Resource (VER) Hourly Forecast Data for Participating and Non-Participating VERs:
 - a. The BPA EIM Entity’s designated VER Forecasting Agent administering this service will produce hourly Forecast Data for each VER resource to be used as hourly scheduling value.
 - i. Through a mutually agreed-to data link (signal), BPA will provide to the Customer the scheduling value for the VER to use in its hourly schedule. The mutually agreed-to data link will be the system of record for the application of the Intentional Deviation Penalty Charge.
 1. The BPA provided scheduling value is the Intentional Deviation Measurement Value for purposes of calculating the Intentional Deviation Penalty Charge as set forth in the BPA Transmission, Ancillary, and Control Area Service Rate Schedules.
 - ii. VERs are expected to use the BPA-provided scheduling value for its Transmission Customer Base Schedule submission as identified in Section F.2.
 - iii. For VERs, the BPA-provided scheduling value will be updated every five (5) minutes.
 1. The following table identifies the timeframes to utilize the BPA-provided scheduling value.

Table 3 – Timeframes for VERs to Utilize the BPA-provided Scheduling Value

Submittal Deadline								
10AM PPT on Day Before Operating Day			T-77 minutes			T-57 minutes		
Forecast Vintage	Posted Period	Schedule Period	Forecast Vintage	Posted Period	Schedule Period	Forecast Vintage	Posted Period	Schedule Period
9:35 PPT	9:35 to 9:40 PPT	+1 Day HE1-HE24	T-85	T-85 to T-80	T+0 to T+60	T-70	T-70 to T-65	T+0 to T+60
			XX:35	XX:35 to XX:40	HE XX+2	XX:50	XX:50 to XX:55	HE XX+2

G. Settlements and Billing

1. The sub-allocation of EIM charges and payments to Customers with Non-Participating Resources, load in BPA's BAA, Interchange, and Intrachange, are set forth in BPA's OATT Attachment Q, Section 8, and Transmission, Ancillary, and Control Area Service Rate Schedules and General Rate Schedule Provisions, or its successor.
2. Each charge or payment will be identified by a charge code name and will be sub-allocated by the BPA EIM Entity according to BPA's Transmission, Ancillary, and Control Area Service Rate Schedules and General Rate Schedule Provisions, or its successor.
3. For generators and loads that are physically located in BPA's BAA but that are pseudo-tied out of the BPA BAA, the Measured Demand and Metered Demand will equal zero.
4. Timing of EIM invoices will follow BPA OATT Section 7. EIM invoices will be separate from other transmission invoices.
5. Sub-allocation of the BPA OATT Schedules 4E and 9E and Interchange Imbalance:
 - a. Customers other than Participating Resources who are eligible to receive the sub-allocation of EIM charges or credits will be identified through the following:
 - i. On exports from BPA -> to another BAA, the BPA settlement system will select the last PSE leaving the BPA BAA for EIM settlement.
 - ii. On imports into BPA <- from another BAA, the BPA settlement system will select the first PSE inside the BPA BAA for EIM settlement.
 - iii. For load internal to the BPA BAA, the Load Serving Entity (LSE) will be invoiced for EIM settlements.
 - iv. For generation internal to the BPA BAA the Generation Owner will be invoiced for EIM settlements.
6. Behind the Meter Resources:
 - a. Behind the Meter Resources within the BPA EIM Entity's BAA that are capable of producing 3 MW or greater or that are modeled in the BPA EIM Entity's and MO's network models will produce a Generation Imbalance charge or credit under Schedule 9E of the BPA OATT. The Generation Imbalance charge or credit will be included on the invoice of the LSE that the Behind the Meter Resource is dedicated to serving and reflected under the appropriate EIM charge codes.
 - b. Generation Estimates for Behind the Meter Resources, as described under Section F of this business practice, will be used as the Transmission Customer Base Schedules for comparison to actual generation.
7. Non-Conforming Load (NCL) Non-Generator Resource (NGR):
 - a. Overview.
 - i. Deviations from the load component of a Transmission Customer's Base Schedule are typically settled as UIE under Schedule 4E of the BPA OATT. Loads that meet the criteria as a NCL NGR (described below) are eligible for treatment as a Non-Participating Resource under Schedule 9E of the BPA OATT. Typically, NCLs are large loads that do not follow a normal load pattern and can come on and off or fluctuate greatly throughout the day. These types of loads may benefit from a more granular scheduling and settlement function provided under 9E.

- b. Criteria for NCL NGR.
 - i. To be eligible for NCL NGR treatment, the Customer's load must meet the following requirements:
 - 1. The load must be separately metered from the Customer's other load.
 - 2. The load must be separately scheduled from the Customer's other load.
 - 3. The load has telemetry.
 - 4. The load is larger than 3 MW.
 - c. Implementation.
 - i. BPA will identify Customers that have loads that meet the eligibility criteria for NCL NGR treatment, and will model those loads as NCL NGRs. BPA will work with such Customers to determine if settlement under Schedule 9E of the BPA OATT is appropriate.
 - ii. NCL NGR loads will be scheduled and tracked separately from other load. The BPA EIM Entity will submit the NCL NGR load schedule separately from a Transmission Customers Base Schedule to the MO.
8. Intrachange Imbalance settlement implementation:
- a. Election.
 - i. BPA will use e-Tags to perform Intrachange Imbalance settlements. In order for the e-Tag author to elect a transaction for Intrachange Imbalance settlement, the author must enter a token of "IMBALANCE_REASSIGNMENT" with a value of "Yes" into the Misc. Info field located in the Market Segment of the e-Tag.
 - b. Eligible transactions.
 - i. Transactions eligible for Intrachange Imbalance settlement will contain segments where the Intrachange settlement is able to be applied to the imbalance quantity between:
 - 1. The source generator and the sink Customer within BPA's BAA;
 - 2. The source generator within BPA's BAA and the PSE of the last transmission segment before leaving BPA's BAA; or
 - 3. The sink Customer within the BPA BAA and the PSE of the first transmission segment after entering the BPA BAA.
 - ii. Intrachange Imbalance settlement will be assessed on an individual e-Tag basis that meets all qualifications. Intrachange Imbalance will not be settled by netting all of a Customer's qualified Intrachange Imbalance e-Tags, due to the possibility of different sources and LMP prices.
 - iii. Customers on the e-Tag will be responsible for ensuring that the election of Intrachange Imbalance settlement is appropriate for the e-Tag. The BPA EESC will not verify that the relevant Customers have agreed upon using the Intrachange Imbalance settlement relationship. The BPA EESC will perform standard e-Tag validation.

9. Measurement and quantities used in the Intrachange Imbalance settlement:

- a. The accounting required for Intrachange Imbalance settlement should always net the adjusted schedule amount to zero (0) at the resource. Regardless of the activity on the e-Tag between T-57 → RTD, Intrachange Imbalance settlements will use a simplified approach by measuring imbalance as the difference between the tagged quantity at the Transmission Customers Base Schedule deadline (T-57) and the final after-the-fact e-Tag quantity.
- b. The following formula logic is used in assessing the amount of imbalance to calculate Intrachange Imbalance settlement:

$$(\text{priAftertheFactTagQty} - \text{priBaseScheduleTagQty}) * ((\text{Avg FMM Gen LMP (FMM intervals 3 and 4)} + \text{Avg RTD Gen LMP (RTD Intervals 1 through 6)})/2)$$

10. For an example of tagging and settlement associated with Intrachange Imbalance, see the [“Intrachange Imbalance Settlement Example.”](#)

11. Implementation of Intrachange Imbalance in specific situations:

- a. Non-Participating Resources (NPRs) and Variable Energy Resources (VERs).
 - i. E-Tags requesting Intrachange Imbalance settlement and sourcing from VERs are treated the exact same as a non-VER Generating Resource, even though a change to the e-Tag after the T-57 deadline does not result in a change to the FMM or RTD VER expected output, and thus does not result in a direct GI settlement.
 - ii. The Source on the e-Tag must map to a modeled generator in order for the settlement system to determine the appropriate LMPs.
- b. Slice.
 - i. In the case of an e-Tag with the Intrachange Imbalance settlement enabled sourcing from BPASLICE (or BPAPOWER), BPA will apply the weighted average of the FMM and RTD LMPs at the three FCRPS aggregate NPRs (ANPRs) as described in the formula in Section G.9.b.
- c. Imports and Exports.
 - i. BPA will apply the Intrachange Imbalance settlement logic to all Interchange import or export e-Tags with a token of “IMBALANCE_REASSIGNMENT” and the value of “Yes” in the Misc. Info field located in the Market Segment of the e-Tag.
 1. For Imports – The market PSE on the first segment of the e-Tag in the BPA BAA will act as the source for the Intrachange Imbalance settlement.
 2. For Exports – The market PSE on the last segment of the e-Tag before the path exits the BPA BAA will act as the sink for the Intrachange Imbalance settlement.
- d. Intrachange Imbalance implementation during an Oversupply Management Protocol (OMP) event.
 - i. If the Generator on an Intrachange Imbalance settlement e-Tag is displaced during an OMP event, then BPA Power Services becomes the “Generator” in the Intrachange Imbalance settlement logic instead of the

source Generator on the e-Tag. If the Generator fails to comply during an OMP event, the Generator will still be assessed the Failure to Comply Penalty Charge, pursuant to the General Rate Schedule Provisions.

12. Related settlements that will not impact Intrachange Imbalance settlement:

- a. MO will settle a Participating Resource for total Generation Imbalance without knowledge of intrachange or sink information.
- b. Intentional Deviation and Persistent Deviation Penalty Charges are not impacted by Intrachange Imbalance settlement.

H. Dispute Resolution

1. Disputes between the BPA EIM Entity and a Customer related to the BPA EIM Entity's implementation of the BPA OATT provisions regarding the manner in which the BPA EIM Entity allocates charges or payments from the MO shall be resolved as follows:
 - a. Disputes involving settlement statements between the BPA EIM Entity and a Customer will be resolved in accordance with the dispute resolution process set forth in Sections 12.1 to 12.3 of the BPA OATT.
 - b. To evaluate disputes, the BPA EIM Entity must be able to identify the item that is being questioned in the settlement statement. Thus, such notice of the dispute must include detailed information about the nature of the dispute, including but not limited to:
 - i. Trading day;
 - ii. Settlement period or trading hour(s);
 - iii. Settlement statement (type) being disputed;
 - iv. Charge code;
 - v. Dispute type (e.g., schedule, meter value, pricing);
 - vi. Detailed description of the dispute;
 - vii. Reason for the dispute; and
 - viii. Transaction support details.
2. Disputes between the MO and BPA EIM Participating Resource Scheduling Coordinators related to EIM charges and payments directly from the MO:
 - a. Disputes involving settlement statements between the MO and BPA EIM Participating Resource Scheduling Coordinators must be initiated and resolved in accordance with the dispute resolution process of the MO Tariff.
 - b. If a Customer with a Participating Resource raises a dispute with the MO, the Customer shall provide notice of the dispute to the BPA EIM Entity within five (5) Business Days of dispute initiation by email to EESCSettlements@bpa.gov.
 - c. Upon resolution of the dispute, the Participating Resource will notify the BPA EIM Entity within five (5) Business Days of the final resolution and inform the BPA EIM Entity of whether the resolution will have any effect on the BPA EIM Entity's settlement statement(s).

3. Disputes between the MO and the BPA EIM Entity:
 - a. The BPA EIM Entity may raise disputes with the MO regarding the settlement statements it receives from the MO in accordance with the process specified in the MO Tariff.
 - b. If the BPA EIM Entity raises such a dispute with the MO, it will provide notice by OASIS posting within five (5) Business Days of initiating the dispute pursuant to the MO's dispute resolution process. Such notice will include detailed information about the nature of the dispute and disputed charges.
 - c. Upon resolution of the dispute with the MO, the BPA EIM Entity will provide notice by OASIS posting within five (5) Business Days of resolution, including the nature of the resolution and any settlement-related effects of the resolution on Customers.
4. Disputes regarding MO charges or payments to the BPA EIM Entity raised by Customers:
 - a. If a dispute arises regarding an MO charge or an MO payment to the BPA EIM Entity that is subsequently allocated by the BPA EIM Entity to a Customer, and such Customer wishes to raise a dispute with the MO, the BPA EIM Entity must file a dispute on behalf of such Customer in accordance with the MO Tariff.
 - b. Pursuant to the MO's dispute resolution process, the BPA EIM Entity has until the 92nd Business Day (T+92B) following the operating day which contains the disputed settlement to raise a dispute with the MO on behalf of Customers.
 - c. To provide sufficient time for the BPA EIM Entity to raise a dispute with the MO on behalf of Customers, the BPA EIM Entity requires Customers to provide notice to the BPA EIM Entity of its desire to initiate a dispute with the MO by email to EESCSettlements@bpa.gov at least seven (7) Business Days prior to the MO's T+92B deadline.
 - d. To evaluate disputes, the BPA EIM Entity must be able to identify the item that is being questioned in the settlement statement. Thus, such notice of the dispute must include detailed information about the nature of the dispute, including but not limited to:
 - i. Trading day;
 - ii. Settlement period or trading hour(s);
 - iii. Settlement statement (type) being disputed;
 - iv. Charge code;
 - v. Dispute type (e.g., schedule, meter value, pricing);
 - vi. Detailed description of the dispute;
 - vii. Reason for the dispute; and
 - viii. Transaction support details.
 - e. The BPA EIM Entity will work with the Customer to resolve the dispute pursuant to the process specified in the MO Tariff.
 - f. The settlement and dispute timeline regarding MO charges or payments to the BPA EIM Entity raised by Customers is outlined below:

Statement Published by MO	Settlement Dispute Deadline [with MO]	Deadline for Notice to BPA EIM Entity	Settlement Dispute Data
T+9B	T+31B	7 Business Days before T+31B	All but estimated meter data
T+70B	T+92B	7 Business Days before T+92B	All
T+11M (T+234B)	Two hundred fifty-six (256) Business Days from the relevant Trading Day T+256B)	7 Business Days before T+256B	Only incremental changes from Recalculation Statement T+70B
T+21M (T+446B)	Four hundred sixty-eight (468) Business Days from the relevant Trading Day (T+468B)	7 Business Days before T+468B	Only incremental changes from Recalculation Statement T+11M or immediately preceding unscheduled Recalculation Statement

I. Notice of EIM Isolation or Corrective Actions

1. In the event that the BPA EIM Entity must declare a temporary contingency and invoke corrective actions pursuant to the BPA OATT, the BPA EIM Entity will provide notice to Customers of such declaration and corrective actions as immediately as practicable by OASIS posting.
2. The BPA EIM Entity will update the notice with additional information on the nature and duration of the contingency and on the corrective measures in place, as promptly as practicable after such information becomes available during and after the contingency.

J. Donation of Transmission Rights by Interchange Rights Holders for EIM Transfers

1. The following provisions apply to all donations of transmission by BPA Interchange Rights Holders for EIM Transfers that source or sink in the BPA BAA.
 - a. BPA Interchange Rights Holders shall communicate their donation of BPA PTP transmission rights by submitting Short-Term Original or Redirect Transmission Service Requests (TSRs) associated with EIM-specific reservation points. Long-Term TSRs may be redirected to Short-Term service for the purpose of donation.
 - b. Donation TSRs must be CONFIRMED by T-77 to be available for EIM transfers.
 - c. Once the BPA EESC creates an e-Tag for EIM Transfers using donation TSRs, such TSRs may not be Redirected, Resold, Transferred or Relinquished for the hour scheduled in the e-Tag.
 - d. BPA Interchange Rights Holders must specify which EIM Transfer they wish to donate transmission for by utilizing specific points (see J.2 table) in the TSR.
 - e. BPA Interchange Rights Holders must submit TSRs with unique Source/Sink points if there are multiple EIM adjacencies at the POR/POD (see J.2 table for POR/PODs requiring unique Source/Sink points).

- f. If the EIM transfer path requires multiple legs of transmission, transmission must be donated collectively for all legs in order to allow transfers on that path (i.e., BPAT.EIM-JOHNDAY and JOHNDAY-COB), while a BPA Interchange Rights Holder may choose to only donate one leg individually.
- g. BPA Interchange Rights Holders donating transmission on NWACI must distinguish between dynamic and static EIM Transfers via the sink (see J.2 table).
- h. BPA Interchange Rights Holders donating transmission for dynamic EIM Transfers on NWACI must follow the Dynamic Transfer Operating and Scheduling Requirements Business Practice in order to request such transmission.
- i. For EIM Transfers involving transmission use on a non-BPA EIM Entity’s transmission system, Transmission Customers should ensure that the non-BPA EIM Entity’s transmission requirements are met.

2. Table of TSR Import/Export Source/Sink and POR/POD Combinations:

Import/Export EIM Entity/CISO	CAISO Resource ID	Source	POR	POD	Sink	Comment
Export to CISO via NWACI (dynamic)	BPAT_MALIN500_CISO_E_EIMDYN		BPAT.EIM	JOHNDAY	CISO.EIM	2 TSRs required
				JOHNDAY	COB	
Import from CISO via NWACI (dynamic)	BPAT_MALIN500_CISO_I_EIMDYN	CISO.EIM	COB	JOHNDAY		2 TSRs required
		CISO.EIM	JOHNDAY	BPAT.EIM		
Export to CISO via NWACI (static)	BPAT_MALIN500_CISO_E_EIMSTA		BPAT.EIM	JOHNDAY	CISO.EIMSTA	2 TSRs required
				JOHNDAY	COB	
Import from CISO via NWACI (static)	BPAT_MALIN500_CISO_I_EIMSTA	CISO.EIMSTA	COB	JOHNDAY		2 TSRs required
		CISO.EIMSTA	JOHNDAY	BPAT.EIM		
Export to CISO via PDCI (static)	BPAT_NOB_CISO_E_EIMSTA		BPAT.EIM	BIGEDDY	CISO.EIMSTA	2 TSRs required
				BIGEDDY	NOB	
Import from CISO via PDCI (static)	BPAT_NOB_CISO_I_EIMSTA	CISO.EIMSTA	NOB	BIGEDDY		2 TSRs required
		CISO.EIMSTA	BIGEDDY	BPAT.EIM		
Export to AVA	BPAT_AVA.BPAT_AVA_E_EIMDYN		BPAT.EIM	AVA.BPAT		
Import from AVA	BPAT_AVA.BPAT_AVA_I_EIMDYN		AVA.BPAT	BPAT.EIM		
Export to AVRN	BPAT_BPAT.AVRN_AVRN_E_EIMDYN		BPAT.EIM	BPAT.AVRN		
Import from AVRN	BPAT_BPAT.AVRN_AVRN_I_EIMDYN		BPAT.AVRN	BPAT.EIM		
Export to IPCO	BPAT_LAGRANDE_IPCO_E_EIMDYN		BPAT.EIM	LAGRANDE		
Import from IPCO	BPAT_LAGRANDE_IPCO_I_EIMDYN		LAGRANDE	BPAT.EIM		
Export to NWMT	BPAT_BPAT.NWMT_NWMT_E_EIMDYN		BPAT.EIM	BPAT.NWMT		
Import from NWMT	BPAT_BPAT.NWMT_NWMT_I_EIMDYN		BPAT.NWMT	BPAT.EIM		
Export to PACW	BPAT_BPAT.PACW_PACW_E_EIMDYN		BPAT.EIM	BPAT.PACW		
Import from PACW	BPAT_BPAT.PACW_PACW_I_EIMDYN		BPAT.PACW	BPAT.EIM		

Import/Export EIM Entity/CISO	CAISO Resource ID	Source	POR	POD	Sink	Comment
Export to PGE	BPAT_BPAT.PGE_PGE_E_EIMDYN		BPAT.EIM	BPAT.PGE		
Import from PGE	BPAT_BPAT.PGE_PGE_I_EIMDYN		BPAT.PGE	BPAT.EIM		
Export to PSEI	BPAT_BPAT.PSEI_PSEI_E_EIMDYN		BPAT.EIM	BPAT.PSEI		
Import from PSEI	BPAT_BPAT.PSEI_PSEI_I_EIMDYN		BPAT.PSEI	BPAT.EIM		
Export to PWX	BPAT_BC.US.BORDER_BCHA_E_EIMDYN		BPAT.EIM	BC.US.BORDER		
Import from PWX	BPAT_BC.US.BORDER_BCHA_I_EIMDYN		BC.US.BORDER	BPAT.EIM		
Export to SCL	BPAT_BPAT.SCL_SCL_E_EIMDYN		BPAT.EIM	BPAT.SCL		
Import from SCL	BPAT_BPAT.SCL_SCL_I_EIMDYN		BPAT.SCL	BPAT.EIM		
Export to TPWR	BPAT_BPAT.TPU_TPWR_E_EIMDYN		BPAT.EIM	BPAT.TPU		
Import from TPWR	BPAT_BPAT.TPU_TPWR_I_EIMDYN		BPAT.TPU	BPAT.EIM		

K. Scheduling of EIM Transfers

1. EIM Transfers that source or sink in the BPA BAA:
 - a. The BPA EESC will author and manage the e-Tags supporting the EIM Transfers that source or sink in the BPA BAA (those EIM scheduling paths identified in the J.2 table) as described below:
 - i. The CPSE will be BPAT.
 - ii. The PSE for BPA EIM Transfers with the CISO will be BPAT.
 - iii. If no donations are received for the Operating Hour, the BPA EESC will author e-Tags reflecting zero (0) MW and BPAT as PSE.
 - iv. The BPA EESC will update e-Tags supporting the EIM Transfers after the hour to reflect actual use of donated transmission.
 - b. Such e-Tags will be created hourly after T-77 for the hour starting time T to T+60 minutes.
 - c. Participating Resources do not e-Tag their market awards. Any market awards from such Participating Resources will flow on the EIM Transfer e-Tags authored by the BPA EESC.
 - d. Dynamic EIM Transfers that source or sink in the BPA BAA require real-time telemetry as described in the Dynamic Transfer Operating and Scheduling business practice.
 - e. Static EIM Transfer e-Tags must have their energy profile adjusted prior to T-20 of each fifteen minute scheduling interval with the expected energy transfer from the binding Fifteen Minute Market (FMM) solution. These adjustments may be performed by any authorized party on the e-Tag and coordinated with BPA. Only one party may perform the adjustment for a 15-minute interval.
2. EIM Transfers that wheel through the BPA BAA:
 - a. Wheel-through transfers must be e-tagged by T-75.

- b. To use the BPA Transmission System for EIM Transfers:
 - i. Authors of such e-Tags must coordinate with the BPA EIM Entity; and
 - ii. E-Tags for wheel-through EIM Transfers must use a unique source/sink, e.g., XXXX.EIM.
- c. Dynamic wheel-through EIM Transfers require real-time telemetry as described in the Dynamic Transfer Operating and Scheduling business practice.
3. All EIM Transfers using the BPA Transmission System will be exempt from real power loss returns during EIM Participation.
 - a. E-Tags for EIM Transfers, including wheel-through EIM Transfers, will utilize a real power loss exempt suffix on the BPA AREFs (<xxxxx>-EIM).

L. Outages

1. Refer to the [BPA Outage Planning and Coordination Policy](#).