

Real Power Loss Return

BPA Transmission Business Practice

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This business practice ~~defines~~describes the process and guidelines for Customers who must return Real Power Losses to BPA.

See the Energy Imbalance Market (EIM) Business Practice for information on Real Power Losses associated with EIM Transfers.

BPA Policy References

- [Open Access Transmission Tariff \(OATT\)](#): Section 15.7; 28.5; Schedule 11; Attachment Q
- [Transmission Rate Schedules/Provisions](#): Section II.J; II.K

~~See the Energy Imbalance Market (EIM) Business Practice for information on Real Power Losses associated with the EIM Transfers.~~

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

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A. General Criteria

1. All Customers are required to return Real Power Losses in accordance with the BPA OATT and this business practice, with the following exceptions:
 - a. A Customer with a Regional Dialogue contract with BPA Power Services that has elected the Load-Following or Block products will have ~~transmission~~Real Power ~~Losses~~ included as part of its power sales contract for its Net Requirement power purchase from BPA.

- i. The Customer must return Real Power Losses and follow the requirements in this business practice for ~~T~~transmission ~~S~~service for delivery of any non-federal generation and the Slice portion of its Slice/Block ~~p~~Product, as applicable.
 - b. A Customer with resources that are delivered to its load without using the BPA Transmission System will not be required to return Real Power Losses ~~losses~~ for the delivery of those resources. An example is a generator behind the meter where all the output is used to serve load on the Customer's side of the meter.
 - c. A Customer taking ~~T~~transmission ~~S~~service from BPA on the Montana Intertie will not be required to return Real Power Losses to BPA in association with such service. BPA is neither the Balancing Authority Area operator nor the ~~loss provider~~ Real Power Loss Provider for the Montana Intertie.
 - d. A Customer will not be assessed Real Power L~~osses~~ for the following uses of the BPA Transmission System:
 - i. Self-~~S~~upply or ~~t~~Third--pParty ~~S~~upply of Operating Reserves.
 - ii. Self-~~S~~upply or ~~t~~Third--pParty ~~S~~upply of Balancing Reserves.
 - ~~iii. Schedules utilized for Bilateral Redispatch for congestion management.~~
 - e. If a Customer purchases the same Firm or Non-Firm product on the Network to or from John Day and then over the Malin 230/Hilltop 345 path, BPA will consider this a single Network use of the Network paths for purposes of determining the Customer's Real Power Losses.
 - ~~f. Procedures and requirements for the return of Real Power Losses under non-OATT agreements specifying the return of in-kind power 168 hours after the use of the BPA Transmission System are specified in Section H of this business practice.~~
- 2. A third-party Real Power Loss Provider who is also a BPA Power Services' Regional Dialogue Slice/Block Product Customer may supply losses from Slice Output.
- 3. Real Power Loss Returns cannot be scheduled in less than hourly increments.
- 4. Real Power Loss Returns cannot be scheduled using the loss profile on the same e-Tags as the Customer's contractual use of the BPA Transmission System.
- 5. Nothing in this business practice is intended to supersede the provisions of any non-OATT agreement related to use of the BPA Transmission System that govern the calculation or return of Real Power Losses.
- 6. Nothing in this business practice affects a Customer's responsibility to comply with scheduling timelines and requirements of the EIM or the applicability of any EIM charges.

7. Any applicable rates or charges in the Transmission, Ancillary and Control Area Service Rates Schedules, including the Unauthorized Increase Charge and the Invalid Loss Return Penalty (ILRP) Charge, will be applied to the return of Real Power Losses.

B. Real Power Loss Return Services

1. A Customer must elect one of the following Real Power Loss Return Services:

- a. In-Kind Loss Return Service ~~:- the return of Real Power Losses through the physical delivery of in-kind power to BPA on one or more e-Tags concurrent with the Customer's use of the BPA Transmission System.~~
 - i. In the event a Customer designates one or more third-party Real Power Loss Providers, the Customer remains responsible for compliance with the requirements of this business practice and its obligation to return Real Power Losses, including any associated charges or penalties under the Transmission, Ancillary, and Control Area Rate Schedules.
 - ii. In-Kind Real Power Loss Returns must be from a Customer-designated Balancing Authority Control Area, system, or generator interconnected with ~~the a~~ Network segment. A Customer may elect to be its own Real Power Loss Provider if it has its own generation and is interconnected with a BPA Network segment.
 1. If a generator is down for any reason, the Customer must continue to deliver energy either by scheduling an alternative Source back through that generator, or from another provider, tagged to BPALOSS (SINK) to ensure that ~~in-Kind~~ Real Power Losses are returned as scheduled.
 - ~~2. No charge loss reservation types will be subject to the Available Flowgate Capability (AFC)/Available Transfer Capability (ATC) checks.~~
 - ~~a. New reservations to return losses affecting external interconnections or interties may be REFUSED due to lack of ATC. If REFUSED, Customers are expected to return their Loss Obligations.~~
 - ~~b. Requests to return losses not affecting external interconnections or interties will be ACCEPTED, regardless of AFC.~~
 - ~~3. No Charge transmission reservations cannot be redirected or resold.~~
- b. Financial Loss Return Service ~~:- the return of Real Power Losses through the purchase of power from BPA Power Services consistent with the current Power Rates Schedules and General Rate Schedule Provisions and any applicable agreements.~~
 - i. To qualify for Financial Loss Return Service, a Customer must timely execute and renew any applicable agreement(s) with BPA Power Services for the purchase of Real Power Losses.

- ii. A Customer must contact a Trader from BPA Power Services at bpamarketing@bpa.gov or 503-230-4111 to arrange for purchase of Real Power Losses from BPA Power Services.
- iii. A Customer electing Financial Loss Return Service will be billed monthly on its transmission bill.
- c. Slice Output Loss Return Service: ~~the return of Real Power Losses by a Customer with a Regional Dialogue Slice/Block power sales agreement through an adjustment to the Customer's Slice Output Energy concurrent with the Customer's use of the BPA Transmission System.~~

C. Real Power Loss Return Service Election

1. A Customer is responsible for having a completed [Notification of Real Power Loss Return Service form](#) on file with BPA.
 - a. Once a Customer has elected and met any other requirements to qualify for a particular Real Power Loss Return Service, the Customer will continue that form of service until the Customer elects and qualifies for a different service or defaults to In-Kind Loss Return Service for reasons described in Section C.5.
2. A prospective Customer must elect a Real Power Loss Return Service by submitting a completed Notification of Real Power Loss Return Service form to RPLPForm@bpa.gov and its assigned Transmission Account Executive at the time it submits an Application package as part of the New Customer Application Process.
3. In the event of any changes to the information for a Customer's Real Power Loss Provider, the Customer must submit an updated Notification of Real Power Loss Return Service form at least 30 Calendar Days prior to the change.
 - a. Before the Customer submits the updated Notification of Real Power Loss Return Service form, any third-party Real Power Loss Provider must fill out appropriate forms to gain access to the OATI Customer Data Entry (CDE) system. See the CDE section of the [Customer Training webpage](#).
4. Except as provided in Section C.6, a Customer may not change its Real Power Loss Return Service within a fiscal year but may elect a different Real Power Loss Return Service for the next fiscal year.
 - a. To elect a different Real Power Loss Return Service for the next fiscal year, a Customer must submit a completed Notification of Real Power Loss Return Service form to RPLPForm@bpa.gov by August 31st or the next Business Day prior to the start of the next fiscal year.
 - b. In order for a Customer to qualify for Financial Loss Return ~~s~~Service for the next fiscal year, the Customer must have executed any applicable agreement(s) with BPA Power Services by August 31st or the next Business Day prior to the start of the next fiscal year.
5. A Customer that fails to timely submit or maintain an election of Real Power Loss Return Service on file with BPA, or that fails to timely execute or renew any applicable agreement(s) with BPA Power Services required for Financial Loss Return Service, will default to In-Kind Loss Return Service.

6. A Customer that defaults to In-Kind Loss Return Service due to the failure to timely renew any applicable agreement(s) with BPA Power Services required for Financial Loss Return Service may submit a written request to its assigned Transmission Account Executive to switch to Financial Loss Return Service before the end of the fiscal year.
 - a. BPA will inform the Customer if it can grant the request.
 - b. If BPA does not grant the request, the Customer will remain on In-Kind Loss Return Service unless and until the Customer elects a different Real Power Loss ~~Return~~ ~~Service~~ in accordance with Section C.4.
7. BPA may refuse requests for service or restrict a Customer's ability to schedule transmission if the Customer does not have a completed Notification of Real Power Loss Return Service form on file with BPA, has not otherwise qualified for a Real Power Loss Return Service, or is not returning Real Power Losses in accordance with the BPA OATT and this business practice.

D. Calculation and Posting of Real Power Losses

1. BPA will calculate a Customer's hourly aggregated Real Power Losses in whole megawatts using the applicable Real Power Loss factor in Schedule 11 of the BPA OATT and standard rounding conventions. The calculation will account for all Confirmed or Implemented e-Tags under the Customer's Service Agreement for the hour and actual data or other information that references the Service Agreement.
 - a. For Financial ~~Return~~-Loss Return Service, BPA will calculate a Customer's hourly aggregated Real Power Losses in kilowatts.
2. The calculated amount of a Customer's Real Power Losses, along with any kilowatt remainders resulting from rounding to whole megawatts, will be posted on the CDE system. Amounts posted before the calculation of the T-30 and T-85 Loss Return Obligations described in Section E are preliminary in nature and made available for planning and reference purposes.
 - a. Between 00:00 and 21:00 of the PreSchedule day, the Real Power Losses for each remaining hour of the current day and the following five (5) Calendar Days will be posted four times per hour.
 - b. Between 21:00 of the night prior to the RealTime day and the close of the RealTime ~~Day~~, the Real Power Losses for the next hour and the two (2) following hours will be posted once per minute. The final one (1) minute posting will be at T-30 prior to each hour of flow.
 - c. Between the start of each hour of flow and 180 hours after each hour of flow, an adjusted Real Power Losses amount will be posted for all previous hours of the current day and each hour for the previous five (5) Calendar Days.
3. In order to gain access to the CDE system, Customers and Real Power Loss Providers must follow the requirements in the [CDE User Guide](#).
4. The Real Power Losses can be accessed using either the CDE interface or Application Programmatic Interface (API). For technical assistance to access data, send an email to txcbs@bpa.gov.

E. Return of Real Power Losses and Loss Imbalance

1. For In-Kind Loss Return Service, the Customer must return to BPA, in accordance with the reservation and scheduling requirements in Section F, an amount of in-kind power equal to the Real Power Losses calculated as of 30 minutes (T-30) prior to each hour of flow (the "T-30 Loss Return Obligation").
 - a. The difference between the amount of in-kind power returned and the adjusted Real Power Losses calculated at T+180, posted by BPA will contribute towards the Customer's total loss imbalance for the hour.
2. For Financial Loss Return Service, the Customer must purchase from BPA Power Services, in accordance with any applicable agreements and the current Power Rates Schedules and General Rate Schedule Provisions, an amount of energy equal to the calculated Real Power Losses.
3. For Slice Output Loss Return Service, the Customer will return Real Power Losses through an adjustment to the Customer's Slice Output Energy ~~S~~ schedule for the hour of flow equal to the Real Power Losses calculated as of 85 minutes (T-85) prior to the hour of flow (the "T-85 Loss Return Obligation").
 - a. Any kilowatt remainders resulting from rounding the T-85 Loss Return Obligation to whole megawatts will be stored per hour and contribute towards the loss imbalance for the hour.
 - b. All events occurring after T-85 that result in a change in the amount of the T-85 Loss Return Obligation will contribute towards the loss imbalance for the hour. These events include but are not limited to e-Tag Energy Profile adjustments, new intra-hour e-Tags, ~~R~~ reliability ~~E~~ events, and after the fact adjustments.
 - c. Any difference between the T-85 Loss Return Obligation and the amount returned using the Customer's Slice Right to Power (RTP) will contribute towards the loss imbalance for the hour.
4. The total loss imbalance for each hour will be settled financially under the Real Power Loss Imbalance Settlement rate in the Transmission Rate Schedules.
 - a. The total loss imbalance for an hour will be settled financially regardless of any waiver by BPA, under the Oversupply Management Protocol, of the obligation to physically deliver in-kind power for the return of Real Power Losses for that hour.
 - b. BPA will waive the loss imbalance portion of the obligation to return Real Power Losses for any hour in which the price in the Real Power Loss Imbalance Settlement rate schedule is negative.
 - c. If BPA determines the posted T-30 or T-85 Loss Return Obligation was inaccurate due to a software issue, the difference between the posted obligation and the corrected amount will contribute towards the total loss imbalance in a future billing month and will be settled financially in that month in accordance with the Real Power Loss Imbalance Settlement in the Transmission Rate Schedules.

F. Reservation and Scheduling of Real Power Loss Returns

1. In-Kind Loss Return Service.

- a. A Customer electing In-Kind Loss Return Service must reserve Firm or Non-Firm transmission for its Real Power Loss ~~#R~~eturns using one of the following procedures:

i. No Charge Reservation.

1. To reserve a No Charge Reservation in OASIS, go to the Reservation Summary screen and select "F-Daily Loss Return", "F-Hourly Loss Return", or "NF-Hourly ~~Concurrent~~-Loss Return" service.
2. ~~For submittal timelines for the No Charge Reservation, see the Requesting Transmission Service Business Practice. No Charge Reservation types must follow the Firm Daily, Firm Hourly or Non-Firm Hourly submittal timelines. See the Requesting Transmission Service Business Practice.~~
3. A No Charge Reservation must show the Real Power Loss Provider as the POR and BPAPOWER as the POD.
4. No Charge Reservation types will be subject to the Available Flowgate Capability (AFC)/Available Transfer Capability (ATC) checks.
 - a. New reservations for Real Power Loss Returns affecting external interconnections or interties may be REFUSED due to lack of ATC. If REFUSED, Customers are expected to return their loss obligations.
 - b. Transmission Service Requests to return losses not affecting external interconnections or interties will be ACCEPTED, regardless of AFC.
5. A No Charge Reservation cannot be redirected or resold.
6. Transmission Service Requests to return losses using the No Charge Reservation type will not be subject to competition.

ii. Daily or Hourly Firm Service purchased at Preschedule.

iii. Hourly Non-~~#F~~irm Service purchased in Real-~~#T~~ime.

- b. Customers electing In-Kind Loss Return Service may return Real Power Losses to BPA on one or more e-Tags.

~~b-c.~~ All e-Tags for Real Power Loss ~~#R~~eturns must be submitted by T-20 prior to the start of flow.

- i. When BPA is in the EIM, EIM scheduling timelines will apply independent of the deadline for submission of e-Tags for Real Power Loss ~~#R~~eturns. After T-57, new e-Tags or e-Tag adjustments will be subject to EIM settlement.

~~e-d.~~ If the e-Tag for the Real Power Loss ~~#R~~eturn specifies the same Network POR as the Service Agreement under which the losses were incurred, the Customer may return losses under the same Service Agreement on unused ~~#F~~irm Reserved Capacity.

~~d.e.~~ _____ Unused Reserved Capacity on a reservation for ~~T~~transmission ~~S~~service on the Southern Intertie cannot be used for Real Power Loss ~~R~~Returns under In-Kind Loss Return Service.

~~e.f.~~ The OASIS Reference field of the e-Tag must reference either the:

~~i.~~ The Customer's Service Agreement contract number under which the losses were incurred; or

~~ii.~~ The AREF of the No Charge Reservation request for a Real Power Loss ~~R~~return.

1. The Sale Ref of the No Charge Reservation must be the same as the Customer's Service Agreement for which losses are being returned ~~;~~ ~~or~~

~~ii.~~ ~~The Customer's Service Agreement under which the losses were incurred.~~

~~f.g.~~ No Product Suffix Code is required on e-Tags for Real Power Loss ~~R~~Returns under In-Kind Loss Return Service.

~~g.h.~~ _____ The e-Tag must have BPAPOWER as the POD on the transmission segment immediately preceding BPALOSS as the sink.

~~h.i.~~ All Short-Term Firm Transmission Service Requests, including requests to return losses, will be processed in queue order.

~~i.~~ ~~Requests to return losses using the No Charge Reservation type will not be subject to competition.~~

2. A Customer electing Slice Output Loss Return Service is not required to submit a No Charge Reservation when utilizing RTP to provide Real Power Loss Returns. Losses will be deducted from the Customer's share of Slice Output for the hour of service, prior to making the share available for scheduling at T-85.

G. Invalid Loss Return Penalty (ILRP) Charge

1. The ILRP Charge applies when a Customer with In-Kind Loss Return Service returns a different quantity of Real Power Losses via Confirmed e-Tag than the Customer's T-30 Loss Return Obligation.
2. For any hour in which BPA has waived, under the Oversupply Management Protocol, the obligation to physically deliver in-kind power for the return of Real Power Losses, the Customer will not be subject to the ILRP Charge.
3. Waiver or Reduction of an ILRP Charge:
 - a. A Customer may request a waiver or reduction of an ILRP Charge in accordance with the Transmission Rate Schedules.
 - i. The request must be submitted in writing to the Customer's assigned Transmission Account Executive and include all of the information necessary to demonstrate it satisfies the criteria for a waiver or reduction in the Transmission Rate Schedules.
 - ii. The Customer should make best efforts to submit the request within 60 Calendar Days from the transmission bill date with the ILRP Charge.

- b. Upon receipt of a request for waiver or reduction, BPA will evaluate the request and decide whether to grant the request.
 - i. If a waiver or reduction is granted, BPA will issue the Customer an appropriate credit as soon as practicable.
- 4. For Customers electing Slice Output Loss Return Service, invalid Real Power Loss ~~Loss~~ ~~Real Power Loss~~ Returns will be addressed as specified in the applicable agreement.

H. Real Power Loss Returns under Non-OATT Agreements

- 1. This ~~Section~~ applies to the return of Real Power Losses under non-OATT agreements that require the return of electric power 168 hours after the use of the BPA Transmission System.
- 2. Calculating and ~~Posting~~ the Real Power Losses:
 - a. On the Business Day before the WECC preschedule day, BPA will calculate, and post on the CDE system, the amount of the Customer's Real Power Losses for each hour.
 - b. The Real Power Losses will be calculated for return 168 hours after the Customer's original use of transmission service.
 - c. When calculating the Real Power Losses for an hour, any kilowatt remainder above a whole megawatt will be carried forward and added to the Real Power Losses for the next hour.
 - d. BPA may recalculate the hourly Real Power Losses after the Business Day in which the amount is posted to CDE to account for any changes that occur after the initial posting.
 - i. Any difference in the amount resulting from the recalculation will be accounted for in the loss ~~return~~-obligation calculated in a future like hour and day.
 - e. BPA will account for any Real Power Loss Returns that are curtailed in the calculation of the Real Power Losses for a future like hour and day, HLH or LLH, to be returned by the Customer.
- 3. The Customer or its third-party Real Power Loss Provider must use the CDE system to access the Customer's ~~Real Power Loss~~ obligations.
- 4. All e-Tags must be submitted for the WECC Preschedule Day no later than 15:00:00 PPT and must reference the appropriate Product Suffix Code:
 - ~~a. Point to Point Service Agreement — LP~~
 - ~~b. Network Integration Service Agreement — L3~~
 - ~~c. Formula Power Transmission contract — L2~~
 - ~~d.a.~~ Southern Intertie owners and Non-Federal participant's (NFP) – L7
 - ~~e.b.~~ Northern Intertie owners - L9
 - i. A list of transmission service product types and associated Product Suffix Codes is available on the Customer Training webpage under

“Scheduling.” [will be adjusted if list is not relocated to the Customer Training webpage with Scheduling Transmission Service BP finalization]

5. Real Power Loss Return reconciliations:

- a. At the end of each Delivery Month, after BPA has balanced with WECC, BPA will work with the Customer to identify and reconcile any difference between losses incurred and losses returned resulting from changes made to schedules or actual data. Adjustment records for reconciliation of Real Power Losses are available to the Customer in its daily loss report in CDE.

~~b. BPA will email the Customer from txcbs@bpa.gov when loss reconciliation has been finalized for a Delivery Month.~~

- ~~i.~~ BPA and the Customer, ~~however,~~ may agree to adjust final reconciled losses if, within three (3) years, either party discovers a reconciliation error resulting from source data errors (e.g., meters, e-Tags, loss database) programming errors, or other clear error. Any errors of this type must be corroborated by data from both BPA and the Customer.