

SUBMITTING ENERGY SCHEDULES

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1.0 OVERVIEW

A Request for Interchange (RFI) is an [eTag-Tag](#) that arranges a new transaction or changes an existing transaction for the current or future operating hour. An [eTag-Tag](#) is an electronic documentation of the energy transaction describing the source, sink, path, transmission contracts to be used, capacity profiles and parties to the transaction. [eTag-Tags](#) help to maintain reliability by ensuring that all parties to interchange energy transactions receive relevant reliability information. The OATI electronic tagging system is used to submit, modify and approve or deny energy schedules ([eTag-Tags](#)).

BC Hydro requires the use of [eTag-Tags](#) to schedule energy in both Pre-schedule and Real-time for all interchange energy transactions, including internal paths.

These Business Practices provide clarification of the rules, standards and practices used by BC Hydro to implement its [Open Access Transmission Tariff \(OATT\)](#)~~OATT~~, which may supplement but not supersede the terms and conditions specified in non-OATT agreements as approved or exempted under the Utilities Commission Act. While the terms of BC Hydro's OATT and these Business Practices govern, [The Transmission Customer](#)~~customers~~ should also refer to the NAESB WEQ Business Standards, WECC Regional Criteria, and WECC Regional Standards, which BC Hydro has followed in most, but not all, respects. BC Hydro also complies with the Mandatory Reliability Standards adopted by the BCUC.

2.0 DESIGNATING TRANSMISSION

An important element of the [eTag-Tag](#) is its specification of which [Transmission Reservation](#)~~Reservation~~ the energy is to be scheduled on.

The ~~CONFIRMED Transmission Service Requests (TSRs)~~ Transmission Reservation(s) identified through the eTag-Tag must satisfy the following conditions:

- be ~~CONFIRMED and active~~ in OASIS and BC Hydro's scheduling system;
- in aggregate have sufficient available energy capacity to accommodate the energy schedule and the transmission allocation profile;
- must have the same POR and POD combination;
- the eTag-Tag transmission allocation profile must be greater than or equal to the energy profile; and
- must not cause a Reliability Limit infringement. If eTag-Tags had previously been approved, BC Hydro will deny the eTag-Tag for insufficient capacity.

If any of the above conditions are not satisfied, the eTag-Tag will be DENIED by BC Hydro.

The ~~PSE (Purchasing-Selling Entity (PSE))~~ can specify the transmission on its eTag-Tag by using any one of the following three approaches:

1. OASIS ID Approach by entering either a single or multiple valid ~~CONFIRMED TSR~~ Transmission Reservation number ~~ARef(s)~~ on the eTag-Tag;
2. Blanket Approach ~~by using one Transmission Reservation on the e-Tag; or entering an active CONFIRMED TSR number on the e-Tag; or~~
3. Stacked Transmission Approach by combining different ~~CONFIRMED TSRs~~ Transmission Reservations with the same POR and POD to support the committed capacity referenced on the eTag-Tag.

These three approaches will be explained below. The eTag-Tag will be DENIED if transmission is not entered correctly.

2.1 OASIS ID Approach

A PSE may designate specific MW maximums for each of the ~~CONFIRMED TSR~~ Transmission Reservation OASIS IDs (ARefARef) referenced using the transmission allocation value.

2.2 Blanket Approach

~~As an alternative to specifying each CONFIRMED and active TSR OASIS number on the eTag, the~~ A PSE may select an ~~active CONFIRMED TSR OASIS ID (ARef)~~ Transmission Reservation ARef and add a "B" (upper or lower case) after the ~~OASIS ID~~ ARef to indicate that it wishes to use a Blanket approach (Blanket ARef).

The Blanket ~~OASIS ID~~ ARef specifies the Transmission Customer, path, POR/POD, and type of ~~transmission~~ Transmission service ~~Service~~ (Firm or Non-Firm) and tells the BC Hydro scheduling system to retrieve all ~~CONFIRMED and active TSRs~~ Transmission Reservation(s) that match those parameters within the transaction time period.

When assigning energy on Firm ~~T~~ transmission service ~~Service~~ specified from a Blanket ~~OASIS ID~~ ARef, all Firm ~~transmission~~ Transmission reservations ~~Reservations~~ have the same priority and eTag-Tags will be assigned by First In – First Scheduled. When assigning energy on Non-Firm ~~transmission~~ Transmission reservations

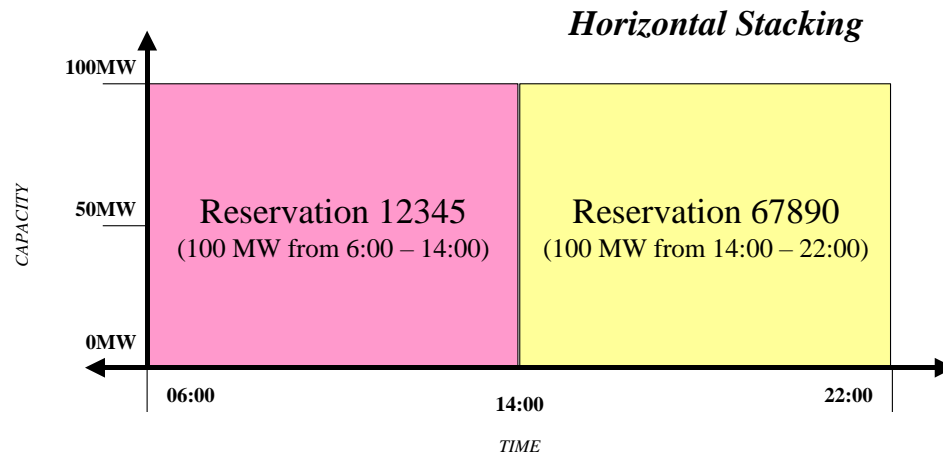
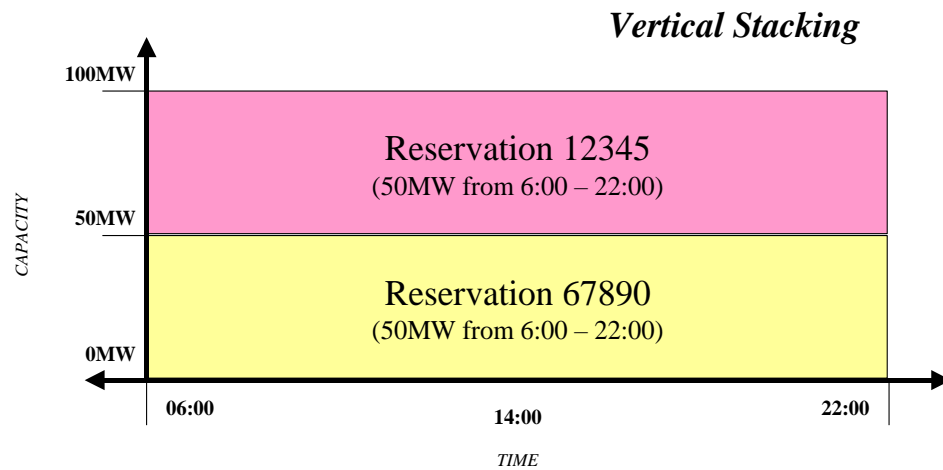
Reservations specified from a Blanket DARef, the eTag-Tags will be assigned to Non-Firm transmission-Transmission reservations-Reservations in descending NERC priority (5 NM going down to 2NH). Refer to BC Hydro’s OATT Business Practice on *Curtailment of Transmission and Energy* for information on NERC priorities for transmission service.

2.3 Stacked Transmission Approach

Transmission stacking allows a PSE to combine different CONFIRMED-TSRs-Transmission Reservations, with the same POR and POD, to support the capacity committed in an associated energy profile. There are two types of transmission stacking:

- Vertical Stacking – PSE combines multiple transmission-Transmission reservations-Reservations to achieve a certain net level of capacity; and
- Horizontal Stacking – PSE combines multiple transmission-Transmission reservations-Reservations to achieve certain capacity over time.

The following diagrams illustrate these concepts more fully. In both cases, the assumed need is 100 MW of transmission capacity for hours 06:00 through 22:00.



If a PSE elects to utilize stacking to support their energy schedules, the PSE must understand the following requirements:

- Stacks must be described through fully qualified profiles for each reservation being used; and
- At no point may the coverage described by the stack be less than the capacity needed for the transaction's energy flow.

3.0 ENERGY PRODUCT CODES

All GPE (Generation-Providing Entity) and LSE (Load-Serving Entity) segments must include an Energy Product Code as a part of their creation profile. An [eTag-Tag](#) without an Energy Product Code or with an invalid Energy Product Code will be DENIED by BC Hydro with appropriate messaging on the [eTag-Tag](#). The list of valid Product Codes is included below. Refer to the WECC Regional Criteria for the definitions associated with each energy product code.

Valid GSE/LSE Product Codes

G-F	Firm Energy
G-NF	Non-Firm Energy
G-FC	Firm Contingent
G-FP	Firm Provisional Energy
G-F1	Hourly Firm Energy
G-EX	Exchange of Firm Energy
C-SP	Capacity for Spinning Reserve
C-NS	Capacity for Non-Spinning Reserve
C-RE	Capacity associated with energy recallable for reserves

[eTag-Tags](#) within each Product (uninterruptible, interruptible, capacity and dynamic) can have a priority assigned to them by a PSE.

4.0 PSE ASSIGNED CUT PRIORITY

A PSE can assign a "Cut _Priority" to each [eTag-Tag](#). This is a numeric value that indicates to BC Hydro the curtailment order of [eTag-Tags](#). "1" is the highest priority and will be curtailed last; "2" is the second highest priority, etc. Refer to BC Hydro's OATT Business Practice on *Curtailments of Transmission and Energy* for more information on the curtailment process.

To enter the "Cut _Priority" [on the e-Tag](#):

1. Click on the Misc Info field on the BC Hydro physical path segment;
2. Enter "Cut _Priority" in the Token column; and
3. Enter a numeric value to indicate curtailment priority in the Value column.

5.0 CAPACITY [eTAGe-TAGSS](#)

Capacity ~~eTag-Tag~~s are created by selecting the ~~eTag-Tag~~ type as Capacity for Contingency Reserve ConRes or Spinning Reserve SpinRes. The eligibility requirements and terms and conditions for Spinning Reserve and Contingency Reserve are set out in Attachment Q-3 of BC Hydro's OATT. Currently, BC Hydro only exports Capacity Reserves.

Per WECC Regional Criteria, a PSE wishing to schedule reserves must submit an ~~eTag-Tag~~ specifying the correct Firm ~~OASIS ID (ARef)~~Transmission Reservation ARef and energy type.

The Load-Serving Entity (LSE) will submit an adjustment ~~eTag-Tag~~. Once the adjustment is approved by the Sink and Source Balancing Authorities BA's, the reserve amount requested is delivered for the duration specified.

To submit a Capacity ~~eTag-Tag~~:

1. Create a Firm energy schedule with a ~~CONFIRMED~~ Firm ~~TSR~~Transmission Reservation(s).
2. Enter a Transmission Allocation profile.
3. Enter a zero Energy Profile.
4. Select ~~ConRes-Contingency Reserve (C-NS)~~ or ~~Spinning Reserve SpinRes (C-NS or C-SP)~~ in the Energy Product Code drop-down list.
5. Select Capacity in Transaction Type ~~as drop-down list~~ Capacity.
6. When capacity is called upon, the PSE enters an adjustment to the energy profile on the ~~eTag-Tag~~ up to the reliability limit or the transmission allocation profile limit.

The Transmission Allocation profile stated in the Capacity ~~eTag-Tag~~ will be used to decrement the Firm capacity that is available for further scheduling on the ~~CONFIRMED TSR~~Transmission Reservation(s) specified.

6.0 DYNAMIC SCHEDULING

The requirements for dynamic scheduling are set out in Attachment Q-1 of the Open Access Transmission Tariff. PSEs cannot submit Dynamic Schedules or ~~eTag-Tag~~s without BC Hydro approval, which will ensure the necessary reviews and system arrangements have been made.

Prior to the submission of any dynamic ~~eTag-Tag~~s, BC Hydro will perform an assessment based on the information provided by the PSE. The PSE should provide as much detail as possible including the expected maximum dynamic capability that is to be enacted between the Sending and Receiving Balancing Authority Areas so that BC Hydro can determine the feasibility of the request. If it is technically feasible, BC Hydro will undertake work within BC Hydro systems to facilitate the submission of Dynamic ~~eTag-Tag~~s.

Dynamic Scheduling energy consists of Non-Spinning Reserve (NSPIN), Replacement Reserve (REPL), Positive Supplemental/Incremental (INC), Negative Supplemental/Decremental (DEC), Spinning Reserve (SPIN), Regulation Up (REGUP), and Regulation Down (REGDN).

PSEs must have transmission for dynamic scheduling purposes up to the amount of the total capacity awarded by the Receiving and Sending Balancing Authority Areas. The transmission reservation can be used for scheduling any of the following Dynamic Scheduling Energy types.

Energy Type	Dynamic Operating Reserve
NSPIN	DConRes
REPL	DConRes
INC	DConRes
DEC	DConRes
SPIN	DSSpinRes
REGUP	DSSpinRes
REGDN	DSSpinRes

Dynamic Scheduling Spinning Reserve (DSSpinRes), Dynamic Scheduling Contingency Reserve (DConRes), and Dynamic Scheduling Regulation Reserve (DSRegRes) are used for the real-time delivery of dynamic schedules and are not available for purchase on OASIS.

To submit a Dynamic [eTag-Tag](#):

1. Identify the Transaction Type as Dynamic;
2. Enter Energy Type (from the table above) under the Contract column in the Market Path;
3. Enter the OASIS ID ([ArefARef](#)) of the ~~CONFIRMED TSRT~~[Transmission Reservation](#), of any priority, under the OASIS column in the Transmission Allocation; and
4. Enter the estimated expected value under the MW column in the Energy Profile and the maximum expected value under the MW column in the Transmission Profile for all energy types.

The Blanket approach as described in Section 2.2 above can be used for Dynamic [eTag-Tags](#).

7.0 ~~Scheduling~~-~~SCHEDULING~~ EIM ~~Transactions~~-~~TRANSACTIONS~~

The California Independent System Operator (CAISO) Energy Imbalance Market (EIM) is a real-time market that is comprised of a 15-minute market and a 5-minute dynamic dispatch market. PSEs can schedule on both import and export paths. PSEs participating in the CAISO's EIM should adhere to the CAISO's scheduling timelines.

A PSE may use its ~~T~~ransmission ~~R~~eservations, of any priority, for EIM transactions.

To submit an [eTag-Tag](#) for an EIM transaction on a ~~T~~ransmission ~~R~~eservation:

1. Identify the Transaction Type as Normal or Dynamic for the 15-minute market and 5-minute market, respectively.
2. In the Misc Info field on the [eTag-Tag](#) identify the source, interconnection point, sink, and whether it's an export or import transaction using nomenclature as agreed upon with BC Hydro.
3. Enter the appropriate Energy Type under the Contract column in the Market Path; and
4. Enter the ~~OASIS-ID (Aref)~~ARef as provided by OASIS.

The Blanket approach as described Section 2.2 above can be used for EIM Scheduling.

8.0 INTERRUPTIBLE ENERGY

Interruptible Energy (Non-Firm energy) is energy that the PSE has specified that it may be interrupted. The source Balancing Authority may interrupt the service by giving notice to the sink Adjacent Balancing Authority of the transaction.

As the Balancing Authority for an export Interruptible Energy schedule, BC Hydro has the right to curtail that schedule if the PSE delivering the export fails to meet its Contingency Reserve Obligation with BC Hydro.

To submit an Interruptible [eTag-Tag](#), enter G-NF in the Market Path section in the Product Code drop-down ~~l~~ist.

9.0 WHEELTHROUGH ENERGY

There are two approaches to schedule Wheelthrough energy:

- the PSE can submit one [eTag-Tag](#) that references a matching Wheelthrough ~~CONFIRMED-TSR~~Transmission Reservation; ~~or~~
- the PSE can submit one [eTag-Tag](#) that references ~~CONFIRMED~~ import and export ~~TSRs~~Transmission Reservations.

10.0 EMERGENCY ENERGY

An Emergency [eTag-Tag](#) is like any other [eTag-Tag](#) except the Transaction Type is ~~Emergency~~EMERGENCY. Similar to all other [eTag-Tags](#), the Emergency [eTag-Tag](#) requires to be scheduled on a valid ~~OASIS-Ar~~ARef. If transmission is not reserved and referenced in the [eTag-Tag](#), a penalty charge will be applied to all unauthorized usage in accordance with OATT Rate Schedule 01.

Refer to BC Hydro's OATT Business Practices on *Intra-Hour Scheduling – Transmission & Energy and Settlements & Billing* for additional information.

11.0 ~~eTAGe-TAG~~ SUBMISSION TIMELINES

~~eTage-Tag~~s should be submitted in accordance with the NAESB Timing Requirements for WECC. RFIs for one hour energy schedules shall be submitted no later than 20 minutes (XX:40) prior to the Start Time of one hour energy schedules.

Refer to BC Hydro's OATT Business Practices on *Processing of Energy Schedules* and *Intra-Hour Scheduling – Transmission & Energy* for additional energy schedule information and submission times for intra-hour ~~eTage-Tag~~s, respectively.

12.0 SUBMITTING MODIFICATIONS TO ~~eTAGe-TAGS~~

The Transmission Customer may request modifications to a PENDING, CONFIRMED or IMPLEMENTED ~~eTage-Tag~~ for non-reliability related issues according to the NAESB Interchange Timing Requirements for WECC.

1. For an IMPLEMENTED ~~eTage-Tag~~, modifications cannot be made within the scheduling hour and only future hours may be modified.
2. ~~A-Correction~~(s) can only be made to a PENDING ~~eTage-Tag~~. Corrections can be made to:
 - POR and POD
 - Designated ~~T~~ransmission ~~R~~eservation
 - Miscellaneous Information Value field on the Load or Generation Line
 - Product Code in the Market Path
3. ~~An Adjustment~~ Adjustment(s) can only be made to a CONFIRMED or IMPLEMENTED ~~eTage-Tag~~. Adjustments can be made to:
 - Generating Profile
 - Transmission Profile
 - Extension to the energy profile (to include hours not previously specified). The PSE must ensure the necessary transmission capacity for the extension is provided on the ~~eTage-Tag~~.

Refer to BC Hydro's OATT Business Practice on *Processing of Energy Schedules* for further information.

13.0 REAL POWER LOSSES

Pursuant to Section 15.7 of BC Hydro's Open Access Transmission Tariff (OATT), Real Power Losses are associated with all ~~T~~ransmission ~~S~~ervice. The Transmission Customer is responsible for replacing losses associated with transmission service as calculated by BC Hydro in Rate Schedule 10. Refer to BC Hydro's OATT Business Practice on Ancillary Services ~~Business Practice~~ for further information. ~~on Losses.~~

Document Change History

Issue	Reason for Issue	Date
<u>9</u>	<u>Updated Language</u>	<u>September XX, 2022</u>
8	Section 8 was amended to conform with <i>WECC Standard BAL-002-WECC-2a – Contingency Reserve</i> to remove the requirement for Interruptible imports to provide reserve obligation multiplier of 100%.	December 9, 2021
7	Revised language in Section 6.0 that the Blanket approach can be used for Dynamic Scheduling. Revised language in Section 7.0 that the Blanket approach can be used for EIM Scheduling	October 6, 2021
6	Included Emergency Energy section and updated section numbers.	April 13, 2020
5	Corrected typo.	April 9, 2018
4	Included EIM Scheduling, tariff changes, & updated overall language.	March 26, 2018
3	Included references to Intra-Hour BP, simplified & updated current language, & corrected references & typographical errors.	December 30, 2013
2	Updated reference.	June 14, 2011
1	Updated procedures. Previously Business Practices 10 & 11.	December 1, 2010

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