Powerex Urges Bonneville To Protect Its Firm NT And PTP Transmission Customers From Inaccurate And Inappropriate EIM Cost Allocations

Powerex supports Bonneville's participation in the EIM, as the sub-hourly economic dispatch offered by a real-time organized market platform provides an opportunity for Bonneville to achieve additional operational efficiencies and to reduce costs. Bonneville has proposed to implement its participation in the EIM with a "direct allocation" of individual EIM charge codes to different Bonneville customers. While such a "direct allocation" approach has the *potential* to be workable and equitable for both Bonneville and its diverse customers, significant care is necessary to ensure Bonneville "gets it right." Failure to do so will almost certainly result in unintended, inequitable harm to Bonneville's customers, including Bonneville's Long Term Firm PTP and Network customers.

One area that requires particular care is the application of EIM locational marginal prices ("LMP", or "nodal prices") to activity that occurs in real-time (*i.e.,* activity after T-57). For context, it is important to consider what Powerex views as three distinct categories of activity to which EIM LMPs have been applied to date:

1. **Settlement of participants that choose to buy or sell 15-minute and/or 5-minute energy through the EIM.** Entities with generation and/or load in Bonneville's transmission service territory (which are located entirely in Bonneville's primary network)[1] currently are able to sell and purchase energy in the bilateral markets. Bonneville's participation in the EIM will extend those opportunities to making sub-hourly real-time sales and purchases through the centralized organized EIM platform, with transactions settled at the resource's (or load's) location. The expanded opportunities for energy sales and purchases will include Bonneville's power business choosing to sell surplus energy when EIM prices are attractive and/or choosing to purchase energy from the EIM when it is similarly economic to do so.
2. **Settlement of energy imbalances.** Generators and loads in Bonneville's transmission service territory (which are located entirely in Bonneville's primary network) submit schedules specifying the quantity of energy that will be produced, delivered, and consumed each hour. Actual quantities can and do differ from these scheduled amounts, however. This includes variations in intra-hour load values above the scheduled quantity (which has required Bonneville to supply additional energy in real-

[1] Bonneville's generation and load customers are located exclusively within Bonneville's primary (or "NW") network. Bonneville's transmission system also includes the Southern Intertie segment: a radial transmission interconnection *between* Bonneville's primary network and external transmission service territories, but with neither generation or load located "in" that segment. This means that activity on the Southern Intertie does not include generation or load located in that segment that will have expanded opportunities to purchase and sell energy, or to receive load imbalance or generation imbalance service. Moreover, with no Firm NT load on the Southern Intertie, Bonneville relies exclusively on schedule curtailments to manage congestion, and neither provides nor has any need for re-dispatch to avoid curtailments. As explained more fully in the discussion of Powerex's proposal, Bonneville's allocation of EIM-related charges needs to reflect these fundamental differences between the primary network and the Southern Intertie.

time from its resources); and similarly intra-hour variations in load values below the scheduled quantity (which has required Bonneville to absorb energy in real-time by reducing the output from its resources). Transmission service providers are required to provide this load imbalance service, which is often referred to as "Schedule 4" service under the *pro forma* OATT. Similarly, variation in intra-hour output from generation that is higher or lower than the scheduled quantity, as is particularly the case for variable energy resources, has also been balanced by Bonneville reducing or increasing supply from its resources. Transmission service providers are also required to provide this generation imbalance service, which is often referred to as "Schedule 9" service under the *pro forma* OATT. Bonneville, like other transmission providers that participate in the EIM, will leverage the EIM to balance these variations in the least-cost manner from all available participating resources (*i.e.,* not necessarily from the Federal system), and will use EIM prices to determine the charges for these load and generation imbalance services.

3. **Settlement of re-dispatch to manage congestion between locations.** When transmission constraints arise and limit the flow of power between locations on Bonneville's system, Bonneville may curtail schedules based on OATT service priority. In order to avoid curtailing transmission customers, Bonneville may instead re-dispatch generation resources, increasing output of resources located "downstream" of the constraint, and reducing the output of resources located "upstream" of the constraint, in equal and offsetting quantities (net of losses). This congestion re-dispatch service is generally provided today to avoid curtailing Firm NT customers (which are only located in Bonneville's primary network) using resources of the Federal power system, and the costs recovered from all Firm NT customers[2]. Once Bonneville joins the EIM, the EIM will be able to draw upon all participating resources (*i.e.,* not necessarily from the Federal system) to find the lowest cost manner of providing this re-dispatch service. The EIM will thus provide any necessary transmission congestion re-dispatch service on Bonneville's network, with LMPs differences between location A and location B being used as the prices to settle the service with Bonneville.

In Powerex's view, it has generally been workable and beneficial to apply EIM LMPs to the first two categories of activity described above. That is, customers that choose to buy or sell energy in the EIM are appropriately settled at the EIM LMPs where the energy is provided. Similarly, customers whose actual generation or load differs from their scheduled quantities are appropriately paid or charged the EIM LMPs at the location where they provided or consumed additional energy.

Regarding the third category of activity, Powerex believes the EIM has also been successful in identifying the least-cost way of relieving congestion on the grid; however, the manner in which the cost of this re-dispatch has been recovered by transmission providers in the EIM has been highly inappropriate and problematic. In particular:

[2] Powerex understands that BPA also has discretion to provide redispatch to avoid curtailing lower priority transmission service, but that such actions are rare.

1. Other transmission providers have elected to apply EIM LMPs not just to the quantity of re-dispatch provided (and charged by the CAISO), but based on the *entire quantity* of transmission schedules submitted (or modified) after T-57 on the congested path. This often results in a gross over-collection of EIM re-dispatch costs from transmission customers relative to the re-dispatch service provided by the EIM, and also a gross over-collection of the net amount actually charged by the CAISO to the transmission provider (after considering that the excess congestion charges applied to customers after T-57 are typically returned to the EIM Entity through offsetting credits in separate EIM charge codes).
2. Other transmission providers have elected to charge the re-dispatch costs to the specific Firm NT, Firm PTP, and Non-Firm transmission customers that schedule energy after T-57, rather than to first apply such re-dispatch costs to <u>all</u> Non-Firm schedules (and/or to alternatively curtail Non-Firm schedules), consistent with the priority of Firm PTP and Firm NT service to the applicable constrained path under the OATT framework.

As a simple example, if a path is full with both Firm and Non-Firm schedules and requires 50 MW of congestion to be relieved, what *should* happen is either 50 MW of Non-Firm schedules are curtailed, or resources are re-dispatched by 50 MW, with the costs recovered from the Non-Firm schedules causing the congestion (and thus directly benefiting from the redispatch). But the highly flawed approach taken by other transmission providers—and proposed to be taken by Bonneville—is to charge the EIM LMPs on the entire quantity of transmission schedules submitted or changed after the new and arbitrary EIM deadline of T-57. This approach not only recovers the wrong costs (based on the quantity of schedules submitted after T-57 rather than on the quantity of re-dispatch service provided and charged for by the CAISO), but it recovers it from the wrong customers (based on the timestamp of schedule submission rather than on OATT service priority).

It is simply a misnomer to refer to this third category of activity as “imbalances” at all, as transmission schedules involve an equal and offsetting quantity of energy at the POR and at the POD. It is particularly inaccurate to associate the need for EIM re-dispatch to schedules submitted by customers that have invested in Firm NT and Firm PTP rights, given that the use of those rights generally:

- **Does not cause transmission congestion** since Firm rights, by definition, represent the capability of transmission facilities to accept schedules *without* experiencing congestion. Firm PTP and Firm Network customers have paid for this priority access under the OATT, and the mere use of these rights must not be mischaracterized as causing congestion.
- **Does not cause Bonneville to incur any <u>net</u> EIM costs** that need to be allocated to customers.[3]

[3] Under the EIM settlements system, there are frequently equal and opposite amounts contained in different charge codes, but that result in far smaller (or no) net financial impact to the EIM Entity.

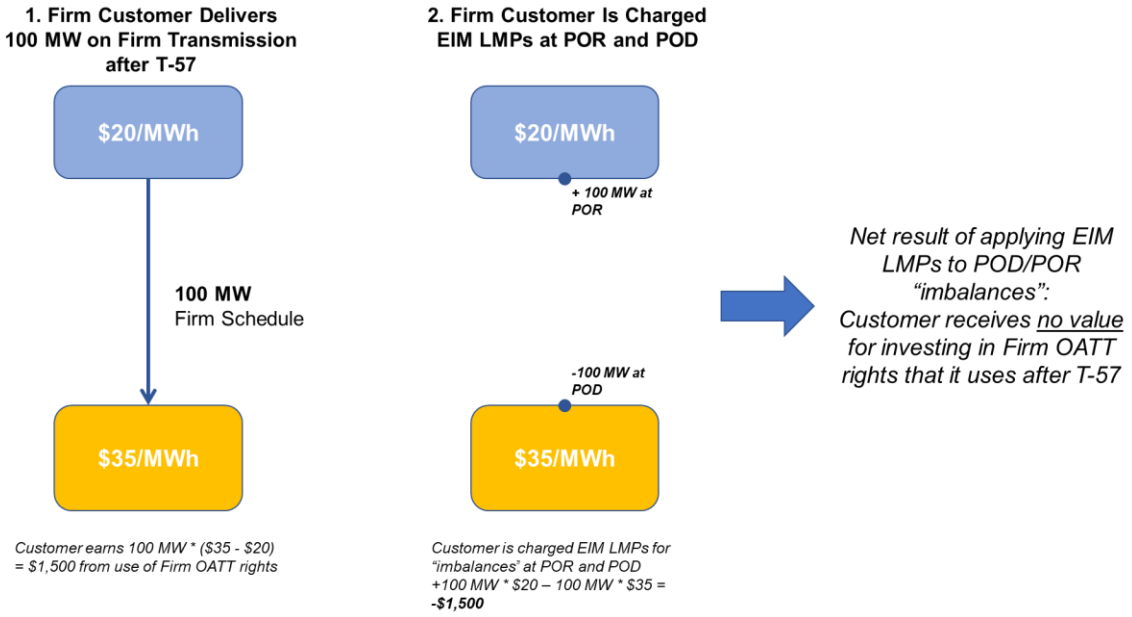
Rather than reflecting the appropriate value of genuine **energy** imbalances, applying EIM LMPs to a scheduled use of transmission—by treating the energy at the POR as a "sale" to the EIM and the energy at the POD as a "purchase" from the EIM—results in charging a "toll" for **transmission service** between two points. But ***Bonneville already has a framework for providing and charging for transmission service (*****i.e., *Bonneville's OATT)****, which applies to service scheduled both before and after T-57.* There is absolutely nothing in the EIM rules that requires—or warrants—Bonneville discarding that framework for transmission service after T-57. Under the approach taken by other transmission providers (and initially proposed by Bonneville), transmission access and the allocation of any re-dispatch costs would cease to be based on OATT service priority. Instead, Bonneville would levy a toll on all transmission service used after T-57, even on service to customers that have already paid for priority Firm rights on its transmission system, and the amount of the tolls would have nothing to do with Bonneville's need to recover the cost of re-dispatch in the EIM.

The harm from such an approach would be experienced by a broad array of Bonneville customers that invest in—and seek to use—Firm transmission service up to the established scheduling deadline, including:

- Bonneville customers that use Firm NT service to use their own resources to balance their generation and/or loads in real-time;
- Bonneville Preference customers that use Firm PTP service to balance their generation and/or loads in real-time;
- Bonneville customers that use Firm PTP service to deliver the real-time output of renewable resources located in Bonneville's transmission territory back to their loads;
- Bonneville "slice" customers that use Firm PTP service to deliver that output to loads within or outside Bonneville's area;
- Sellers of the output of renewable resources outside Bonneville's service area that wheel-through Bonneville's territory using Firm PTP service;
- Bonneville customers that invest in Firm PTP service to make sales in the CAISO's Hour Ahead market;
- Bonneville customers that invest in Firm PTP service to make sale in the CAISO's Fifteen Minute Market;
- Bonneville customers that use Firm service to support dynamic scheduling; and
- Bonneville customers that set aside Firm PTP transmission and make it available for EIM transfers (*i.e.,* ETSRs).

If the ability of these customers to use their Firm rights ends at T-57—or if schedule changes after T-57 exposes the customers to unpredictable EIM "imbalance" charges—then the value provided by investing in Firm transmission service from Bonneville will be significantly eroded. Perhaps the greatest impact would be seen on Firm transmission on the Southern Intertie, where the application of EIM imbalance charges to schedules after T-57 would completely nullify the value of Firm transmission to support CAISO intertie bids in the HASP or FMM, and

would also nullify any value of Firm transmission made available for EIM transfers as ETSRs. On the Southern Intertie as well as on certain paths on Bonneville's primary network, a key benefit of investing in Firm transmission is to be able to move power from a lower-price market to a higher-price market, thereby earning the price difference that reflects congestion. But the application of EIM imbalance charges to such deliveries would completely unwind that value, charging the Firm transmission customer for the very value that those rights were intended to earn.



At the same time, applying EIM imbalance charges solely based on the T-57 deadline would also allow Non-Firm schedules that are submitted early enough to use transmission capacity paid for by Firm NT and Firm PTP customers, while evading any contribution to recovering Bonneville's cost of re-dispatch to manage the congestion the Non-Firm schedules may cause. These effects would not only be economically harmful for the customers that invest in Firm transmission to support activity after T-57, but will ultimately weaken the business model through which Bonneville recovers the annual revenue requirement for its transmission system. In Powerex's view, the consequences of implementing Bonneville's EIM participation in this manner are likely to far outweigh the potential benefits EIM participation would otherwise provide to Bonneville and its customers.

Powerex urges Bonneville to avoid repeating the flawed and harmful application of EIM LMPs to transmission schedules that other transmission providers have adopted. Instead, Powerex believes Bonneville has an opportunity to demonstrate that EIM participation can be achieved in a manner that respects and upholds the OATT framework. This entails:

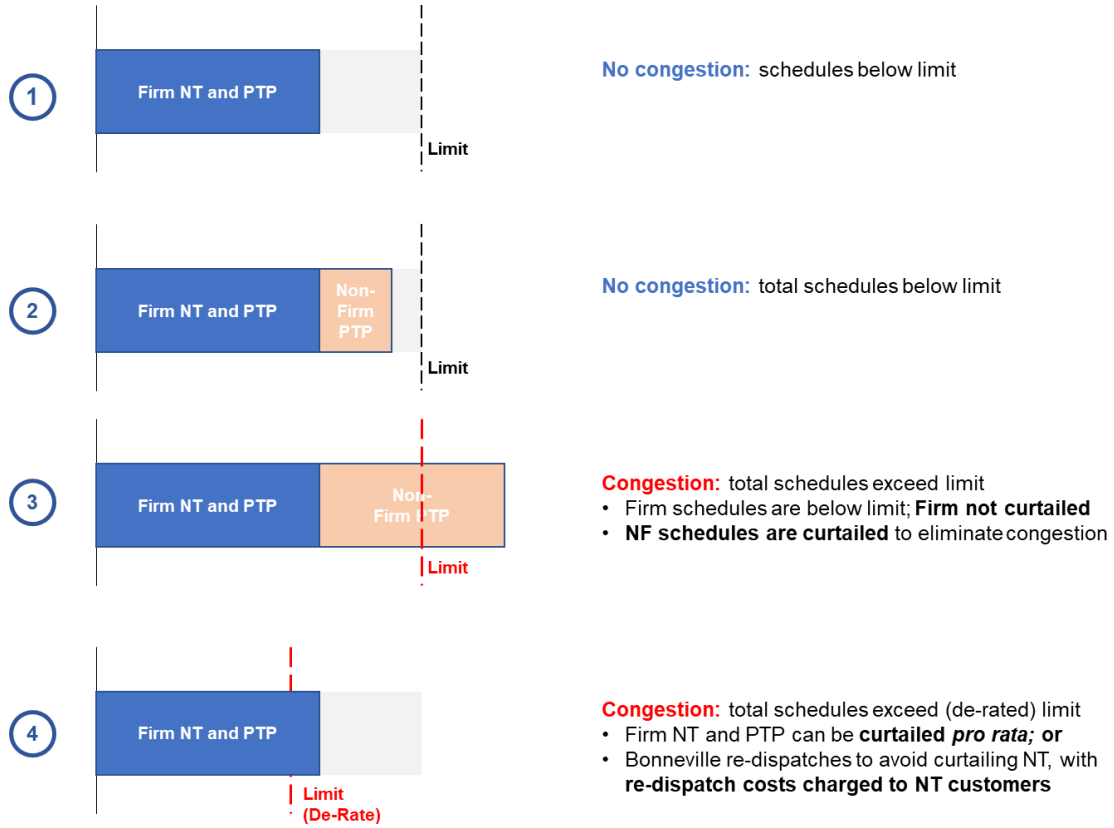
- Leveraging the EIM to find lower-cost re-dispatch opportunities to manage congestion on its primary network;
- Recovering the cost of that re-dispatch accurately and according to OATT service priority, meaning that:

- Discretionary redispatch costs are recovered first from Non-Firm schedules on the congested paths (and/or Non-Firm schedules are curtailed instead of such discretionary re-dispatch); and
- in the limited instances that congestion arises from only the use of Firm rights (*e.g.,* in the case of de-rates), the OATT provides that the cost of NT re-dispatch to avoid curtailing Firm load customers is recovered through the rates for Firm NT service—that is, from NT customers *as a group*. Notably, this cost should be lower than today, all else equal, due to the efficiency of the EIM in providing this service.

In the following sections, Powerex identifies the specific OATT principles that it believes must be—and can be—preserved under Bonneville's EIM implementation, and Powerex outlines a specific proposal for Bonneville to allocate EIM re-dispatch costs consistent with those principles.

Bonneville's EIM Implementation Must Uphold OATT Principles of Transmission Access and Cost Recovery

Bonneville's participation in the EIM is intended to realize benefits from more efficient dispatch of available resources and diversity benefits across the broader footprint; it should not alter the core principles under Bonneville's OATT for providing transmission access or for recovering costs, including congestion re-dispatch costs. The figure below illustrates four common congestion scenarios and the familiar outcomes under the OATT framework:



Powerex believes that Bonneville's EIM implementation should strive to preserve these same general principles, even as its EIM participation provides additional opportunities to efficiently manage its system. More specifically, EIM implementation can be compatible with the OATT framework if the following apply:

- When there is space for all Firm (Network and PTP service) schedules, these schedules do not incur any additional charges, even if there is congestion (i.e. due to Non-Firm schedules and/or additional EIM transactions);
- When there is congestion as a result of Non-Firm schedules, then the Non-Firm schedules should either be curtailed (as they are today) or assigned the EIM-based congestion charges (in the form of EIM "imbalance charges" at the POR and POD, which reflect the cost of EIM re-dispatch needed to avoid non-firm curtailments); and
- When there is not enough space for all Firm (NT and PTP) schedules (*i.e.,* due to a de-rate), then either:
    - All Firm schedules should be curtailed *pro rata* (as occurs today on the Southern Intertie segment and should continue to occur on the Southern Intertie segment); or
    - Resources are re-dispatched to avoid NT curtailment, with the net cost recovered from NT customers (as occurs today on Bonneville's primary network and should continue to occur, but with more efficient and cost-effective re-dispatch being provided by the EIM).

Powerex is greatly concerned that Bonneville's proposal to apply EIM "imbalance" charges to the use of Firm PTP and Firm Network transmission rights after T-57 will not only fail to achieve the above outcomes, it will be entirely incompatible with the OATT framework. Indeed, Bonneville's proposal will in many ways *supplant* the OATT priority-based framework within the operational timeframe of the EIM. As demonstrated in the examples below, Bonneville's proposal to apply EIM "imbalance energy" charges to Firm PTP and Firm Network schedules submitted or modified after T-57 will lead to two major problems:

1. It will inappropriately apply EIM congestion charges to Firm PTP and Firm Network schedules, even though there is sufficient transmission space for Firm schedules to flow and no re-dispatch is necessary, nor are any costs incurred by Bonneville to enable these schedules to flow; and
2. When a de-rate results in insufficient transmission space to allow Firm schedules to flow, the proposal will fail to accurately recover Bonneville's net EIM re-dispatch costs, and will instead grossly overcharge Firm schedules relative to the EIM re-dispatch costs actually incurred (through multiple offsetting EIM charge codes).

Example 1: Bonneville's Proposal Charges Firm Schedules For Use Of Their Rights

Consider a path between locations A and B, with a scheduling limit of 100 MW. This path has been fully subscribed on a Firm basis to NT and PTP customers.

Bonneville receives the following schedules on this path:

- Prior to T-57: 100 MW of Non-Firm PTP schedules are submitted.
- After T-57: 100 MW of Firm NT and PTP schedules are submitted.
- Bonneville relies on the EIM to resolve congestion.
- EIM prices are $25/MWh at location A and $30/MWh at location B.

If Bonneville were to treat schedules submitted after T-57 as "imbalances," and apply charges based on the EIM prices, the following result would occur:

- The Firm schedules would incur a net "imbalance" charge of $500[4] (i.e. the cost of congestion / redispatch in the EIM)
- The Non-Firm schedules would not be curtailed, and would not incur any imbalance charges (i.e. would not incur any congestion / re-dispatch costs)

In this manner, the Non-Firm schedules cause congestion, but are not curtailed and do not bear any of the cost of the congestion and resulting redispatch costs they caused to be incurred. At the same time, the Firm schedules—which could be fully accommodated without causing congestion—are charged for the cost of relieving the congestion created by the Non-Firm schedule. The mere fact that the Non-Firm schedule was submitted prior to the EIM T-57 deadline is allowed to completely negate the service priority of the Firm transmission reservations.

Example 2: Bonneville's Proposal Allocates Re-Dispatch Costs To Firm Customers

Now consider that the path is de-rated, with a reduced limit of 90 MW.

Bonneville receives the following schedules on this path:

- Prior to T-57: no schedules submitted
- After T-57: 100 MW of Firm NT and PTP schedules are submitted.
- Bonneville relies on the EIM to resolve congestion.

The EIM solution would include re-dispatch of resources to resolve the 10 MW of congestion on the path. The cost of this re-dispatch is $50.[5] However, under the "imbalance charge" proposal there is no mechanism for this re-dispatch cost to be recovered broadly from all NT customers, as occurs today. Instead, the only customers being charged under the "imbalance charge" approach are the specific customers that submit schedules on their Firm rights.

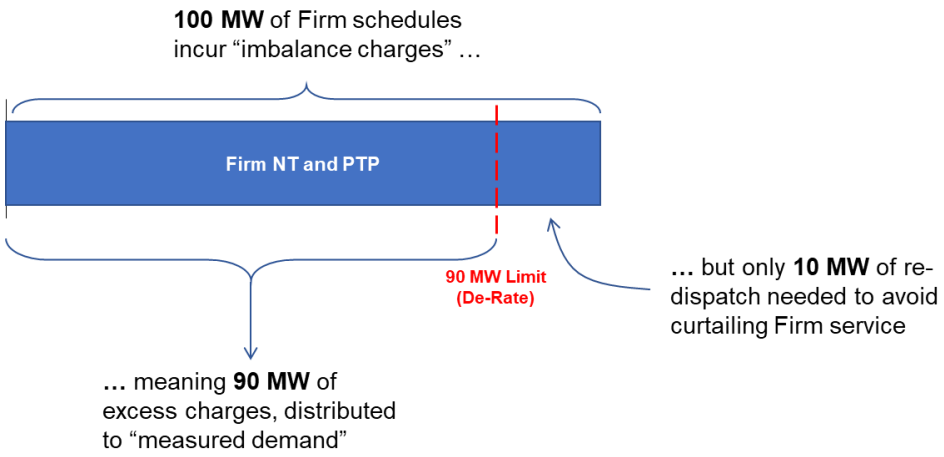
Example 3: Bonneville's Proposal Over-Collects Actual Net Costs of Re-Dispatch

[4] This would be settled as (1) a "positive energy imbalance" of 100 MW at the POR, and paid a price of $25/MWh; and (2) a "negative energy imbalance" of 100 MW at the POD, and charged a price of $30/MWh.

[5] Re-dispatch involves increasing the output of generation at the POD by 10 MW, at a cost of $30/MWh, and reducing generation at the POR by 10 MW, which reduces bid-in production costs of $25/MWh.

Examining the actual application of "imbalance charges" in the above example reveals a further problem with this approach. The Firm NT and PTP schedules are not only charged for cost of the 10 MW of re-dispatch; the schedules are charged for the entire 100 MW scheduled after T-57.

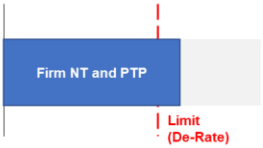
That is, the Firm schedules will pay "imbalance" charges of $500, exceeding the actual re-dispatch cost by tenfold. This overcollection will, in turn, be returned to Bonneville through a separate "neutrality" charge code and likely distributed to "measured demand". In other words, the application of imbalance charges not only improperly allocates re-dispatch costs to the Firm NT and PTP schedules on the de-rated path, but also shifts a potentially far larger amount of money from customers that use their Firm NT and PTP rights after T-57 to measured demand.



Notably, the cost allocation associated with the above example would be entirely different if the same 100 MW of Firm NT and PTP schedules were submitted *prior* to T-57. In that case, the very same cost of re-dispatching 10 MW would be borne by measured demand, and there would be no imbalance charges applied to the Firm schedules. This highlights that the appropriate allocation of re-dispatch costs *can* be achieved when Firm NT and PTP schedules are not treated as "imbalances" and subject to congestion charges. In addition, it reveals the arbitrariness of allowing the timing of schedule submissions drive the allocation of costs of re-dispatch to avoid curtailing NT customers.

The table below summarizes the above scenarios, and identifies (1) the outcomes that occur currently under the OATT; (2) the appropriate outcomes that *should* occur upon EIM implementation; and (3) the inappropriate outcomes that will occur if Bonneville treats Firm schedules as "energy imbalances" and applies congestion charges to such activity.

	Current OATT	Appropriate EIM Implementation	Proposed "Imbalance Charge" Approach
	• Non-Firm schedules are curtailed	• Non-Firm schedules are curtailed or charged EIM congestion, regardless of *when* schedule submitted • Firm schedules not charged congestion, even if submitted after T-57	• Firm schedules are charged congestion if submitted after T-57 • Non-Firm schedules are not curtailed, and not charged congestion if submitted prior to T-57 *"T-57 decides, not OATT priority"*



	Primary network • BPA re-dispatch to avoid curtailing NT customers • Costs recovered from NT customers *Southern Intertie (no NT)* • Firm schedules curtailed *pro rata*	*Primary network* • **EIM** re-dispatch to avoid curtailing NT customers • Costs recovered from measured demand *Southern Intertie (no NT)* • Firm schedules curtailed *pro rata*	• EIM re-dispatch (network and Southern Intertie) • Firm schedules after T-57 pay cost of re-dispatch • Firm schedules may be significantly over-charged, with surplus distributed to measured demand

A Proposal To Ensure Bonneville Recovers Its Costs Consistent With OATT Principles

The problematic outcomes discussed above *are not* the inevitable result of participating in the EIM, in and of itself. Rather, they are the product of the specific manner in which EIM-related charges between Bonneville and the CAISO (as EIM market operator) are translated into charges between Bonneville and its transmission customers. In particular, they are the product of applying different charges to different schedules based on the timing of schedule submission—before or after T-57—rather than on each schedule's OATT service priority.

Powerex believes a workable solution can be developed by first considering the specific activities that can be made more efficient through the EIM. These activities, described previously, include:

- Providing an opportunity for generators and loads located within Bonneville's service territory to choose to buy or sell energy on a sub-hourly basis, by being dispatched through the EIM;
- Efficiently balancing deviations in load and generation located within Bonneville's service territory; and
- Re-dispatch of resources to manage congestion and avoid curtailment of Firm NT load on Bonneville's primary network.

As indicated previously, these activities and potential benefits differ materially between Bonneville's primary network and the Southern Intertie segment. Consequently, Powerex believes Bonneville's approach to its EIM participation should be appropriately tailored to reflect these differences.

Recommended Approach: Primary Network

On Bonneville's primary network, the EIM can substantially increase the efficiency of all real-time activity: intra-hour sales and purchases, generation and load imbalance service, and congestion re-dispatch. The key question is how can Bonneville more efficiently recover the EIM-related costs for those activities. For the first two categories of activity—intra-hour sales and purchases, and generation and load imbalances—Powerex believes that a "direct allocation" of EIM LMPs is both workable and efficient. EIM LMPs represent the most accurate available measure of the intra-hour value of energy, whether it is the value of energy sold by a supplier or the cost of energy needed to balance deviations in load or wind output.

Where the EIM is used to resolve congestion on Bonneville's primary network through re-dispatch of resources, however, the application of EIM LMPs to schedules submitted or changed after T-57 will not ensure recovery of Bonneville's net actual re-dispatch costs in a manner consistent with the OATT framework. In particular, such an approach would:

- Improperly allocate congestion re-dispatch costs to Firm schedules submitted after T-57;
- Fail to allocate congestion re-dispatch costs to Non-Firm schedules submitted before T-57; and
- To the extent re-dispatch was necessary to avoid curtailment of Firm NT load, this approach fails to allocate re-dispatch costs to all Firm NT load customers (through the rates for Firm NT service).

Powerex believes that these three critical flaws can be addressed by the following targeted modifications to Bonneville's initial proposal:

1. Similar to today, Bonneville should apply priority-based curtailments for all schedules submitted by T-57 before finalizing its EIM base schedules at T-40. This will help ensure that Bonneville's EIM base schedules are feasible, and it will also protect against the early submission of Non-Firm schedules on paths that are likely to be congested as a way to avoid responsibility for congestion charges.
2. Apply EIM-based "imbalance" charges, as initially proposed by Bonneville, but:
    a. **Reverse** any congestion charges (based on the differential between the EIM LMPs at the POR and POD) of Firm NT and Firm PTP schedules submitted after T-57; and
    b. **Apply** any congestion differential between the EIM LMPs at the POR and POD of any Non-Firm schedules submitted prior to T-57.

The reversal of EIM congestion charges to Firm NT and Firm PTP schedules (2.a, above) is critically necessary to reflect that, under the OATT, congestion re-dispatch costs are never allocated to Firm NT or Firm PTP service on the basis of individual entities' particular schedules or paths.

The additional application of any congestion differential of the EIM LMPs at the POR and POD of Non-Firm schedules submitted prior to T-57 is necessary to ensure that, consistent with the OATT framework, the consequences of congestion are applied first to Non-Firm schedules,

regardless of when those Non-Firm schedules are submitted. The time that Non-Firm schedules are submitted does not alter their impact on congestion; consistent with cost causation principles, the time that Non-Firm schedules are submitted also must not alter their responsibility for recovering Bonneville's congestion re-dispatch costs.

Powerex notes that, in any given interval, the dollar value of the reversed congestion charges to Firm NT and Firm PTP schedules (2.a) may be greater or smaller than the dollar value of the additional charges to Non-Firm schedules (2.b). To the extent this results in a net deficit, it indicates that actual transmission capacity was less than the volume of Firm NT and Firm PTP schedules (*i.e.,* transmission facilities were de-rated). In that event, the net re-dispatch costs are appropriately allocated to all Firm NT customers (not just those that happened to schedule on the de-rated path). This will occur by allocating the net deficit amount to measured demand, with the aggregate accumulated amount of such charges recovered through subsequent rate determinations.

There may also be intervals in which the two adjustments proposed above result in a net surplus to Bonneville, indicating that the total quantity of Non-Firm schedules exceeded the quantity of re-dispatch needed to relieve congestion. Powerex does not believe this is a problem that must be addressed immediately, however, since:

- Congestion on the primary network has historically been infrequent;
- Bonneville will curtail schedules based on OATT priority at T-57, limiting the likelihood of congestion after T-57, and limiting the volume of Non-Firm schedules that will be charged congestion based on EIM LMPs; and
- Bonneville may track the extent of re-dispatch revenue overcollection from Non-Firm schedules to determine if further refinements are necessary.

Powerex emphasizes that its proposed combination of EIM congestion charge reversals to Firm NT and Firm PTP schedules and additional charges to Non-Firm schedules will not expose NT customers to "new" costs, or deny these customers any of the benefits of Bonneville's EIM participation. As a general matter, the bulk of congestion on Bonneville's transmission system arises when both Firm and Non-Firm customers seek to schedule deliveries. In these cases, the congestion charge reversals proposed by Powerex will be fully funded by the proposed charges to Non-Firm schedules. This means that the remaining costs will ***at most*** reflect the very limited cases of re-dispatch needed to avoid curtailment of Firm schedules. Powerex notes that such costs are very limited today, and Bonneville's EIM participation can be expected ***to reduce those costs further*** by finding more efficient re-dispatch solutions that use all participating resources.

Powerex believes the EIM may enable additional opportunities for Bonneville to enable incremental congestion management (beyond NT redispatch) to similarly avoid curtailment of Firm PTP schedules during transmission de-rates on the primary network. Powerex supports an exploration of the potential for Bonneville to provide such additional services, including discussion of approaches to ensure that the cost of such a new service is appropriately included in the rates for firm PTP transmission service.

Recommended Approach: Southern Intertie Segment

The Southern Intertie segment is used strictly to schedule transfers between Bonneville's primary network and external transmission systems. There is no generation or load located in Bonneville's Southern Intertie service area, significantly limiting the scope of activity that will change as a result of Bonneville's EIM participation. More specifically, there will be no EIM participating resources or loads located in the Southern Intertie segment. There also will be no load or generation imbalances on the Southern Intertie segment, obviating the need for Schedule 4 or Schedule 9 service. And while the Southern Intertie segment certainly experiences congestion, this is managed exclusively through curtailment of schedules; there is no Firm NT load on the Southern Intertie that needs to be protected from curtailment by re-dispatching resources.

The EIM will make it possible, at least in concept, to use resource re-dispatch to avoid curtailment of Non-Firm schedules (which Bonneville does not currently do). Powerex does not oppose this approach for congestion on Bonneville's primary network, since the EIM will already be required to perform re-dispatch to avoid curtailment of Firm NT schedules, and provided that the re-dispatch costs are appropriately recovered consistent with OATT principles. But Powerex strongly cautions Bonneville against using EIM re-dispatch to manage any congestion on the Southern Intertie, given the long-running challenges posed by the seams issues on those facilities. As has been extensively discussed in other forums, Non-Firm schedules on the Southern Intertie during hours of congestion are often the result of seams issues with the CAISO that enable these Non-Firm rights to flow ahead of Firm rights, subverting the OATT priority. If Bonneville were to use the EIM to re-dispatch resources to avoid curtailing Non-Firm schedules, it would exacerbate these seams issues, increasing the risk of harm while offering no potential upside benefit.

Powerex recommends that, on the Southern Intertie segment, Bonneville implement its EIM participation in the following manner:

1. Continue to rely exclusively on schedule curtailments, in order of OATT priority, to manage congestion on the Southern Intertie. This will avoid exacerbating existing seams issues, and also eliminate the need to recover any re-dispatch costs.
2. Amend Bonneville's tariff or otherwise clarify that EIM congestion charges will not apply to the Southern Intertie segment (*i.e.,* for POD and POR combinations of Big Eddy and NOB, John Day and COB, or John Day and Captain Jack). Since the first recommendation, above, ensures there will be no re-dispatch costs associated with Southern Intertie congestion, Bonneville will have no need to recover such costs from schedules on the Southern Intertie, and consequently there will be no need to apply any congestion charges to any Southern Intertie activity.
3. Ensure that EIM credits to Bonneville associated with a share of EIM transfer revenues on the Southern Intertie (*i.e.*, congestion rent received from the CAISO) are distributed to the Bonneville transmission customers (including Bonneville's power function) that made Firm PTP rights on the Southern Intertie available to the EIM.

Powerex also notes that a similar approach of continuing to rely exclusively on schedule curtailments may also be the most straightforward approach to manage interchange scheduling on other BPA interties and looks forward to further discussion with Bonneville on this topic.

Next Steps

Powerex believes the proposal above establishes a workable framework for Bonneville to adopt a "direct allocation" approach for EIM charge codes while allowing Bonneville to continue to respect and uphold the valuable benefits its customers derive from making long-term investments in Bonneville Firm transmission service. This, in turn, will preserve Bonneville's existing transmission business model for recovery of its transmission costs through rates. Powerex urges Bonneville and stakeholders to evaluate the proposal, and looks forward to further collaboration to develop a detailed methodology to implement the approach in a manner that is fully compatible with the CAISO's settlement structure for EIM.

Upon Bonneville and its customers' review and support for the proposal described above, Powerex believes next steps would include:

1. Determining the specific details of how each applicable CAISO EIM charge code would be allocated, including the development of new debits and credits that would be applied by Bonneville to specific customers and under certain conditions, and determining any corresponding adjustments necessary to related charge code balances to ensure BPA remains revenue neutral (*e.g.,* neutrality account balances that will continue to be allocated to broad customer groups, such as measured demand).

2. Drafting of proposed tariff language, which would differ from the tariff amendments made by other transmission service providers to support EIM implementation.

3. Identification of new operational processes and/or business practices necessary to implement OATT-based curtailment procedures for schedules submitted at T-57 (including the curtailment of non-firm schedules across the BPA transmission system, and the pro-rata curtailment of firm schedules as necessary on the Southern Intertie) to ensure base schedules are feasible prior to any subsequent EIM redispatch activity.

Powerex appreciates Bonneville's consideration of this proposal and looks forward to further collaboration on next steps.