Powerex Comments on Bonneville White Paper: Evaluation of Alternatives

Powerex appreciates the opportunity to provide these initial comments on Bonneville's December 22, 2015 draft Regional White Paper ("White Paper"). These comments respond to Bonneville's request for stakeholder input evaluating the proposed alternatives, with reference to the principles and criteria articulated in the White Paper.

The White Paper identifies several rate and non-rate alternatives to address the seams issue between Bonneville and CAISO. Non-rate alternatives address the extent to which customers can be highly confident that they will be able to obtain Hourly Non-Firm ("HNF") transmission service, whereas rate alternatives address the economic incentive to rely on Hourly Non-Firm service for deliveries to CAISO rather than committing to Long-Term Firm service. Powerex appreciates Bonneville's careful and thorough exploration of both rate and non-rate alternatives to address the seams issue with CAISO. The measures identified in the White Paper are comprehensive, and Powerex has not identified any additional alternatives that should be considered at this time.

Powerex strongly <u>supports</u> Bonneville moving forward with the measures identified by Bonneville in the workshop as their preliminary leanings. Powerex strongly <u>opposes</u> Alternative No. 0, which is to do nothing at all. As explained in more detail below, Powerex believes that the precise manner in which each measure is implemented is vital to ensuring the effectiveness of these measures. Specifically, Powerex supports Bonneville implementing the following rate and non-rate measures:

1. Rate Alternative No. 2—Calculate the Southern Intertie HNF rate based on a different assumption of "high value" hours. The revised rate must be sufficiently high (*e.g.,* in the range of $10-$13/MWh) in order to be highly effective. The rate change should become effective in October 2016 following an expedited 7(i) process.
2. Rate Alternative No. 5—Eliminate the HNF interruption credit.
3. Non-Rate Alternative No. 6—Sell HNF inventory once.
4. Non-Rate Alternative No. 9—Delay the HNF release time on the Southern Intertie to a time closer to the start of each delivery hour (*e.g.,* T-90 or T-120).

While Powerex expresses support for the specific rate and non-rate measures listed above, the alternatives presented in the White Paper were designed to address one of the three discrete but interrelated seams issues that have been identified on the Southern Intertie.[1] Powerex appreciates Bonneville's recognition that <u>all</u> of the seams issues must be addressed, and continues to encourage Bonneville to initiate additional customer workshops in the coming months to examine the remaining seams issues that are not addressed by the measures Bonneville adopts as a result of this current process.[2]

In addition, Powerex continues to support Bonneville remaining open to future dialog with CAISO and other downstream Southern Intertie transmission service providers on the potential for future collaboration regarding the seams issues on the Southern Intertie. Powerex reiterates, however, that such discussions should neither prevent nor delay Bonneville taking decisive action to address the seams issues by implementing the unilateral measures discussed below.

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[1] White Paper at 4-5.
[2] As discussed more fully below, a meaningful increase in the rate for Hourly Non-Firm service on the Southern Intertie is also likely to help address the effective loss of Firm priority on seams with other downstream transmission service providers on the Southern Intertie (*i.e., "*seams issue 3").

Powerex wishes to reiterate its sincere appreciation to Bonneville and in particular the staff that have led and contributed to the workshops in this initiative. Bonneville's efforts have provided transmission customers with an opportunity to discuss and examine critical and technically complex issues. The multiple workshops, presentations, data analyses and successive rounds of written comments have been invaluable to developing a solid record as well as a shared understanding of these issues from all stakeholders' perspectives. Bonneville staff's willingness to share its preliminary leanings at the last workshop also provided valuable transparency regarding the potential next steps in this initiative.

I. Powerex Supports Rate Alternative No. 2

The White Paper contemplates revising the number of hours used to calculate the Hourly Non-Firm rate, from its current value of 80 hours per week to a value of either 56 hours or 20 hours per week. These revised inputs would result in a Southern Intertie Hourly Non-Firm rate of $5/MWh or $13/MWh, respectively.[3]

Increasing the Hourly Non-Firm rate on the Southern Intertie has the potential to be highly effective in addressing the seams issue with CAISO. It may be very difficult for Bonneville to unilaterally ensure that Non-Firm service on the Southern Intertie has an inferior product quality to Firm service in practice, as intended under Bonneville's OATT. However, it is comparatively straightforward for Bonneville to ensure that Non-Firm service is not an economic alternative to investing in Long-Term Firm service. Powerex therefore concurs with Bonneville's preliminary assessment that increasing the Hourly Non-Firm rate could provide a strong incentive for customers to subscribe to Long-Term Firm service in the North-to-South direction and increase the likelihood that the Southern Intertie remains fully subscribed.

For the rate increase to be effective in addressing the seams issue with CAISO, however, it must be sufficiently high to deter "cherry picking" in a large number of hours. The higher the rate, in other words, the less likely that market conditions will make it economic for a transmission customer to use Hourly Non-Firm service to bypass the priority of Firm Bonneville transmission service. In Powerex's view, the low end of the range ($5/MWh) would be insufficient to materially deter the use of Hourly Non-Firm transmission service to bypass Long-Term Firm priority. A rate at the high end of the range (*i.e.*, closer to $13/MWh), however, could be highly effective under most market conditions. Of course, a rate equal to the cost of expansion, as proposed under Rate Alternative No. 3, would be highly effective under virtually all conditions.[4]

Bonneville has articulated a sound cost-based foundation for modifying the rate. Namely, Bonneville could revise the number of hours per week used to convert the annual rate to an hourly rate. Powerex believes that 20 hours per week is consistent with the objective of identifying the number of "high value" hours, which are unique to the Southern Intertie given that CAISO's day-ahead market operates at an hourly granularity. This is distinguishable from Bonneville transmission service on other paths, which are used to undertake bilateral transactions generally under industry standard multi-hour blocks of 8,16, or 24 hours. Moreover, by clearly basing the calculation of the Southern Intertie hourly rate on a revised input parameter, which is neither based on past usage patterns nor expected to reflect usage going forward, Bonneville can ensure the rates under this methodology are stable and will not change dramatically with each rate case.

A significant increase in the rate of Hourly Non-Firm transmission service on the Southern Intertie also would not raise a valid "rate shock" concern. First, a higher Hourly Non-Firm rate will have no material

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[3] White Paper at 22.
[4] Bonneville December 17, 2015 presentation, at slide 7, rating Alternative 3 as "Highly Effective" at "preserving advantages of LT firm in the CAISO market," while Alternative 2 (high) is rated "More Effective" and Alternative 2 (low) is only "Somewhat Effective."

adverse impact on Bonneville's revenues from sales of Hourly service. This is primarily because Hourly Non-Firm sales account for only a small fraction of Bonneville's total Southern Intertie revenues in the first place. Even if Hourly Non-Firm revenues decline, this impact would be more than outweighed by the benefit of ensuring that Long-Term Firm service is fully subscribed. And of course, it is entirely possible that Hourly Non-Firm sales revenues will actually increase, if the reduction in quantity is less than the increase in the rate. As the White Paper's "industry scan" shows, an Hourly Non-Firm rate of approximately $10-13/MWh would be broadly consistent with the hourly tariff rates on the southern segment of the COI and PDCI.[5] Powerex does not consider it to be "rate shock" for Bonneville to set its Hourly Non-Firm rates at a level comparable to the prevailing Hourly Non-Firm rates charged on the southern segments of the Southern Intertie facilities.

The second possible concern is that the higher Hourly Non-Firm rate would somehow undermine the full utilization of the Southern Intertie facilities. Again, exactly the opposite is true. Full economic utilization is ensured when incremental transaction costs are minimized, as this allows transmission customers to move power between regions in response to even small price differences. One way to achieve maximum utilization could be to just make short-term transmission service entirely free. While this would surely encourage full utilization, it would just as assuredly cannibalize all sales of Long-Term Firm service and would be wholly incompatible with Bonneville's business model for recovering the revenue requirements of the Southern Intertie. An alternative way to achieve maximum utilization is to ensure that the full capacity of the Southern Intertie is sold on a long-term basis, ahead of the day-ahead and real-time wholesale energy markets. This means that, in every hour of the year, there will already exist sufficient "sunk" transmission reservations to allow the entire capability of the Southern Intertie facilities to be scheduled, without requiring the incremental purchase of any additional transmission rights.

This is the precise outcome that is supported by Rate Alternative No. 2. By strengthening the incentives for transmission customers to purchase Long-Term Firm service on the Southern Intertie, Bonneville can ensure that the Southern Intertie can be fully utilized using transmission reservations that have already been sold on a long-term basis; no additional "hurdle rates" will need to be incurred in order to achieve full use of the transmission facilities. Transmission customers investing in Long-Term Firm service will have multiple ways to use those reservations, all of which result in maximum utilization: (1) they can use the reservation to deliver their own energy resources from the Northwest to California; (2) they can use the reservation to acquire energy resources from other parties in the Northwest, and deliver these to California; or (3) they can re-sell their reservations in the secondary market to third parties that are able to make more efficient use of the transmission service. Critically, Bonneville's Hourly Non-Firm rate—regardless of level—will not be a hindrance to any of the three activities described above. They can all take place to the fullest extent possible under given market conditions, which means that the Southern Intertie utilization will be maximized as well.

The worst possible outcome in terms of full economic utilization of the Southern Intertie would be one in which Long-Term Firm service is no longer fully subscribed, meaning that transmission customers would need to purchase incremental transmission rights on a short-term basis in order to make full use of the Southern Intertie. In this case, the hourly transmission rates *would* indeed be a "hurdle rate" that could present a barrier to otherwise efficient transactions and undermine utilization. This is the very scenario that appears to be emerging under the existing rate framework and that, in Powerex's view, will not be avoided by a rate increase that is only in the "low" end of Bonneville's proposed range. A materially higher rate (*i.e.,* in the range of $10-$13/MWh), however, will likely be sufficient to significantly improve

[5] White Paper at 10, showing hourly non-firm rates on the southern segment of the COI of $11.14/MWh (SMUD, for COTP service) and $17.64/MWh (TANC), and hourly non-firm rates on the southern segment of the PDCI of $10.81/MWh (LADWP for on-peak hours).

the prospects of the Southern Intertie capacity continuing to be fully sold on a Long-Term Firm basis, and thus for the maximum economic utilization of the Southern Intertie.

A higher rate for Hourly Non-Firm service on the Southern Intertie will also help address the loss of BPA Firm priority at seams with Southern Intertie transmission providers other than CAISO (*i.e.,* seams issue 3 in the White Paper[6]). While the underlying cause of that seams issue is different, its harm can also be mitigated by reducing the financial incentive to use BPA Hourly Non-Firm service to flow ahead of BPA Firm service. Hence, implementing Rate Alternative No. 2, especially at the higher end of Bonneville's proposed range, has a high likelihood of addressing two of the three seams issues that have been identified on the Southern Intertie.

For the foregoing reasons, Powerex believes Rate Alternative No. 2 is feasible to implement, well supported by and within Bonneville's ratemaking authority, will lead to stable outcomes over time, can be limited in application only to the Southern Intertie, and does not raise any valid "rate shock" or utilization concerns. If the rate is set at a sufficiently high level, this alternative has the potential to be highly effective in addressing the effective loss of BPA Firm priority at the seam with CAISO, and potentially also with other downstream transmission providers on the Southern Intertie.

The change in the Hourly Non-Firm rate for the Southern Intertie should be implemented through an expedited 7(i) process, allowing the new rate to become effective beginning October 1, 2016. Having determined that a rate change is likely to be the most effective way to address the seams issue with the CAISO, there is no valid reason to delay its implementation. Bonneville transmission customers investing in Long-Term Firm service on the Southern Intertie have already experienced the harm of the seams issue for several years. The workshops convened by Bonneville have led to broad agreement on the importance of the issue and on the need for Bonneville to take decisive action to address it. To delay this action would prolong the harm being experienced by Bonneville's transmission customers and create uncertainty about what actions Bonneville will take at a later date. Moreover, an expedited 7(i) process should be relatively straight forward, given the extensive work completed in this workshop, including identifying an appropriate rate solution. Finally, the expedited 7(i) process would allow Bonneville to gain important experience to gauge the effectiveness of the higher rate, allowing any adjustments to be pursued promptly in the BP-18 rate case proceeding one year later. Conversely, if a rate change is deferred until the BP-18 rate case, any adjustments would have to wait two years. For the foregoing reasons, Powerex strongly supports an expedited 7(i) proceeding to implement a change in the rate for Hourly Non-Firm service on the Southern Intertie.

II. Powerex Supports Rate Alternative No. 5

Bonneville also proposes to eliminate the interruption credit for Hourly Non-Firm service on the Southern Intertie. Powerex supports this measure from a conceptual and a pragmatic standpoint. Conceptually, transmission reservations are always subject to the availability of the underlying facilities. De-rates can and do occur, and when they do, it is entirely possible that transmission customers will be unable to schedule on their reservations, or will experience curtailments on previously accepted schedules. Eliminating the interruption credit for Hourly Non-Firm service merely exposes transmission customers reserving Hourly Non-Firm service to the same availability-related consequences faced by customers reserving service for longer durations.

As a practical matter, the elimination of the interruption credit will essentially make the *effective* cost of Hourly Non-Firm service somewhat higher on an expected value basis. This is unlikely to be a material change, however, given the very limited frequency with which the interruption credit is currently applied.

[6] White Paper at 5.

But while this change may play only a limited role in addressing the seams issues with CAISO, it is conceptually sound and carries no identified risks of adverse consequences. If there were significant implementation burdens or costs, or if the elimination of the credit were expected to carry cognizable risks of adverse or unintended consequences, it likely would not be worth pursuing at this time. But since implementation appears straightforward and no downside risks have been identified, Powerex supports Bonneville pursuing this measure.

III. Powerex Supports Non-Rate Alternative No. 6

Non-Rate Alternative No. 6 would modify the manner in which Bonneville manages its Hourly Non-Firm inventory to make sure that unused Firm service is only “sold once” as Hourly Non-Firm. Currently, Firm reservations that are not scheduled by the close of the preschedule window are made available as Hourly Non-Firm at approximately 10 p.m. on the day prior to flow. When a transmission customer purchases Hourly Non-Firm service, the remaining HNF ATC is reduced by the amount of the reservation. If that customer subsequently schedules on the reservation, any portion of that reservation that is not scheduled is added back to the HNF ATC. In effect, Hourly Non-Firm service is not sold merely on the basis of Firm reservations that have not been fully scheduled, but also on Hourly Non-Firm reservations that have been partially, but not fully scheduled. As the White Paper points out, other transmission providers do not re-sell unused Hourly Non-Firm, and Bonneville could cease doing so by modifying its business practices, ATC Implementation Document, and software. Powerex supports Non-Rate Alternative No. 6 as it avoids excessive over-selling of transmission capacity. Consequently, this non-rate measure will decrease the ability to rely on the availability of Hourly Non-Firm service to make deliveries on CAISO market awards.

IV. Powerex Supports Further Consideration of Non-Rate Alternative No. 9

Non-Rate Alternative No. 9 would modify the time at which Bonneville makes Hourly Non-Firm service available. In the workshops, Bonneville initially proposed an earlier release, such as noon of the preschedule day. Both in the workshops and in the White Paper, Bonneville has also proposed to consider a later release, such as 60 minutes prior to each deliver hour (T-60). Powerex greatly appreciates Bonneville’s examination of the role that the timing of the release of Hourly Non-Firm can have on the seams issue with CAISO. Powerex has carefully evaluated the likely outcomes of changing the release timing and, as discussed further below, strongly believes that an earlier release would actually exacerbate, rather than mitigate, the seams issue with CAISO, and would also greatly exacerbate the other seams issues identified on the Southern Intertie. A later release, however, could be an important improvement, though Bonneville may wish to consider a release between T-90 and T-120 to ensure Hourly Non-Firm service would be available in time to support participation in CAISO’s real-time market, which requires bids to be submitted by T-75.

Changes to the timing of release of unused Firm as Hourly Non-Firm ultimately seek to address the extent to which a seller that receives a CAISO market award can be confident of being able to purchase Hourly Non-Firm transmission service from Bonneville to deliver on that award. This certainty is the result of two factors: (1) the amount of competition from other transmission customers to purchase Hourly Non-Firm service, and (2) the quantity of Hourly Non-Firm service that will be available from Bonneville. If the quantity of Hourly Non-Firm service is high, and the competition to acquire it is low, then an individual market participant can be highly confident that they will be successful in obtaining Hourly Non-Firm service from Bonneville. If, conversely, the quantity of Hourly Non-Firm service offered by Bonneville is low, and the competition among purchasers is fierce, then an individual market participant would face a considerable risk of not being able to obtain Hourly Non-Firm service from Bonneville (and would thus be encouraged to commit in advance to purchase Firm service).

Changes to the release timing for Hourly Non-Firm service can therefore be evaluated based on their potential effect on:

1. The likely demand from other transmission customers seeking to purchase Hourly Non-Firm service; and
2. The supply of Hourly Non-Firm service from Bonneville.

As Bonneville explained in the workshop, an earlier release may increase the demand among transmission customers to obtain Hourly Non-Firm service, since the earlier release would occur before the results of CAISO's day-ahead market are known. It is certainly possible, for instance, that requests for Hourly Non-Firm service would be received not only from transmission customers that ultimately *receive* a CAISO award, but also from customers that submitted a day-ahead offer *but do not ultimately receive* an award. Powerex understands that one of Bonneville's rationales for considering an earlier release is that it may increase competition for Hourly Non-Firm service in this manner, thereby reducing the certainty of receiving an Hourly Non-Firm reservation. But the extent to which this will occur depends heavily on the degree of uncertainty over whether or not offers into the CAISO day-ahead market will be accepted. If customers can reliably predict whether they will receive a CAISO award, then the increase in demand for Hourly Non-Firm service will be very limited. Unfortunately, this is the outcome that Powerex expects from an earlier release time, as a large amount of CAISO day-ahead awards on the interties are currently the result of "self-schedules" in CAISO's market—effectively price-taker offers that are virtually guaranteed to be accepted by the CAISO except under extraordinary circumstances. Only "price-sensitive" offers face material uncertainty over whether or not they will receive a CAISO award. But, for the entities submitting "price-sensitive" offers, it will likely be too financially risky to commit to purchasing Hourly Non-Firm service prior to knowing the result of the CAISO day-ahead market, and they may cease participating altogether. Thus, Powerex expects that the earlier release of Hourly Non-Firm service by Bonneville will not materially increase demand, and hence will not significantly reduce the ability of entities to rely on using Hourly Non-Firm service to make deliveries to CAISO.

Perhaps more critically, Bonneville's consideration of an earlier release also needs to consider the impact on the supply of Hourly Non-Firm service. A release at, say, noon of the preschedule day would require Bonneville to determine how much Firm service is "unused" even before the prescheduling deadline of 3 p.m. But prior to 3 p.m., Firm reservations that will be used in the day-ahead time-frame (to schedule deliveries pursuant to CAISO day-ahead awards and/or to schedule deliveries on the non-CAISO southern segment) may not yet be scheduled at the time of the Hourly Non-Firm release. This has the potential to massively *increase* the inventory of Hourly Non-Firm service that Bonneville would be selling. It is entirely possible, and even likely, that the net effect of an earlier release would be to significantly increase, rather than decrease, the ability of entities to rely on Hourly Non-Firm service for deliveries to CAISO.

Finally, while there is considerable uncertainty about the effectiveness of an earlier release in resolving the seams issue with CAISO, an earlier release would unambiguously make the seams issues with other downstream transmission service providers significantly worse. In considering any of the measures set forth in the White Paper, Powerex believes a guiding principle should be to not exacerbate the other existing seams issues on the Southern Intertie. Simply put, an earlier release would make it possible to schedule on Bonneville Hourly Non-Firm service within the preschedule window. This is not possible at present—Bonneville Hourly Non-Firm can only be used to schedule a delivery within the real-time scheduling window. If Bonneville Hourly Non-Firm service became available in the preschedule window, it would offer additional opportunities for entities with Firm reservations on downstream transmission providers' systems (*e.g.,* from LADWP on the PDCI, or from TANC or SMUD on the COTP) to acquire

Bonneville Hourly Non-Firm service and submit a complete e-Tag in the preschedule window. For example, a customer with Long-Term Firm service on the southern segment would now be able to purchase Bonneville Hourly Non-Firm service in the preschedule window, purchase day-ahead energy in the Pacific Northwest, and submit an e-Tag by the preschedule deadline of 3 p.m. This will create a powerful new opportunity for customers with Firm transmission service on the southern segment to utilize Hourly Non-Firm Bonneville service, and hence less opportunity for Bonneville Firm transmission reservations to be used. An earlier release of Bonneville Hourly Non-Firm service would increase the importance of Firm transmission on the southern segments, while Bonneville Firm transmission would become even less relevant than it is today.[7]

For the foregoing reasons, Powerex strongly urges Bonneville *not* to release Hourly Non-Firm service any earlier than it currently does.

While an earlier release would likely be highly detrimental to the seams issues on the Southern Intertie, a *later* release does not pose such risks, and is worth further consideration. A release at T-60, as discussed at the workshop and in the White Paper, could be beneficial in two ways. First, it would give transmission customers with Firm reservations the maximum amount of time to use their reservations, and thus reduces the potential for the amount of "unused" Firm to be overstated (and hence the HNF inventory to be overstated). Second, a T-60 release would result in a "rolling release" of Hourly Non-Firm service on a one-hour-at-a-time basis. In contrast, the current release practices make Hourly Non-Firm service available for all hours of the operating day at the same time. A one-hour-at-a-time release therefore introduces additional uncertainty that may be effective in deterring transmission customers from relying on Hourly Non-Firm service to schedule multi-hour blocks of energy in real-time.[8]

Discussion of a later release has focused on T-60, but Bonneville could consider alternative release times that are also close to the start of each delivery hour, but may differ in their alignment with other scheduling timelines. For instance, bids into the CAISO real-time market are due at T-75; for participants that are reluctant to submit real-time bids unless they have already obtained Bonneville transmission service, a T-60 release may be viewed as "too late." In this case, Bonneville may wish to consider releasing Hourly Non-Firm service on a one-hour-at-a-time basis at, say, between T-90 and T-120. Compared to a T-60 release, a release between T-90 and T-120 may result in greater competition for HNF service, consistent with Bonneville's goal of reducing the certainty of acquiring it.

While Powerex supports Bonneville implementing a later release time, Powerex is also not opposed to preserving the current release time provided that the aforementioned rate and non-rate measures are fully implemented.

The table below summarizes Powerex's evaluation of alternative release times.

[7] To be clear, Powerex supports Bonneville taking rate and non-rate measures that result in Firm service on *both* the northern and southern segments of the Southern Intertie being important, sought-after and valuable. This ensures that an entity that has invested in Firm transmission on the southern segment has incentives to transact with entities that have invested in Firm Bonneville transmission service, and vice versa. It is only by ensuring that Firm transmission on both segments is equally important that equitable and stable outcomes can be achieved.

[8] An additional benefit of releasing HNF one hour at a time is that unused Firm will no longer be released as Daily Non-Firm. Avoids need to change Daily NF rate to avoid circumventing the higher HNF rate.

Release Time	Alignment with other market timelines	Increases uncertainty of acquiring HNF by:		Allows HNF for multi-hour deliveries?	Exacerbates other seams issues on Southern Intertie?
		Reducing Quantity of HNF	Increasing Demand for HNF		
Noon of preschedule day	• After bid submission deadline for CAISO day-ahead market (10 a.m.), but before CAISO awards are known (~1 p.m.); • Before WECC preschedule deadline	**Significantly overstates unused Firm and hence also overstates HNF inventory**	No expected material increase in demand	**Enables multi-hour deliveries in real-time and preschedule windows**	**Very high risk of further undermining importance of Firm BPA transmission relative to Firm transmission on southern segment**
Status quo *10 p.m. of preschedule day*	• After CAISO day-ahead market awards are known (~1 p.m.) • After WECC preschedule deadline	*n/a*	*n/a*	Enables multi-hour deliveries in real-time window	*n/a*
T-90 to T-120	• Before bid submission deadline for CAISO real-time market (T-75)	Reduces overstating of unused Firm*	Same as *status quo*	Cannot use HNF for multi-hour deliveries	No
T-60	• After bid submission deadline for CAISO real-time market (T-75)	Reduces overstating of unused Firm*	May reduce demand as entities no longer able to buy HNF before CAISO real-time bid submission deadline	Cannot use HNF for multi-hour deliveries	No

* *A later HNF release time reduces the risk of overstating "unused Firm" by calculating HNF inventory closer to the final opportunity to schedule on Firm reservations. But Firm may still involuntarily go "unused" if HNF can bypass Firm priority due to seams issues; this is not addressed by a later release time.*