Powerex Comments on Southern Intertie Issues

Powerex appreciates the opportunity to provide these comments regarding the Southern Intertie issues raised and discussed during the BP-16 transmission rates workshops.

Customers that Pay the Embedded Costs of the Southern Intertie are not Receiving the Economic Value of those Facilities

Transmission investment is funded on the basis of a simple proposition: the entities that pay the cost of the investment receive the economic value of the transmission facilities. This is true both under the OATT framework used by Bonneville and under the LMP framework used by CAISO. Powerex has sought to bring to Bonneville's attention that, on the Southern Intertie, this basic value proposition no longer holds. While the effect has initially been felt by entities that have invested in Long Term Firm transmission on the Southern Intertie, the issues raised by Powerex also undermine the longer-term viability of Bonneville's business model for recovering the annual revenue requirements and funding upgrades and expansion on its Southern Intertie facilities.

The analysis performed by FTI Consulting and shared by Powerex demonstrates that the value earned by Bonneville's transmission customers on the Southern Intertie has declined sharply in the past five years, even as the total value of end-to-end transmission service between the Pacific Northwest and California has increased. These results—whose accuracy was not challenged during the customer workshops—can lead to one of two possible conclusions: either (1) Bonneville's Southern Intertie facilities are, indeed, of little or no economic value; or (2) they are of significant value but that value is not being realized by the Bonneville transmission customers that pay the embedded cost of the facilities.

The first interpretation was advocated at the September 10, 2014 BP-16 transmission rates workshop by Southern California Edison. Under this interpretation, the FTI Consulting analysis merely confirms that Bonneville's transmission facilities have declined in value, and may even be "stranded" investments. If this were the case, additional investments in the maintenance, upgrade or expansion of Bonneville's Southern Intertie facilities would not be justified and should be avoided or cancelled.

Powerex rejects this view. As demonstrated by FTI's analysis, transmission service between the Pacific Northwest and California has arguably never been *more* valuable than it is today. While the value clearly exists, FTI's analysis also shows that little of this value actually flows back to *Bonneville* transmission customers, while a disproportionately large share of the value is collected as congestion charges on the CAISO side of the facilities. In other words, while the value of transmission *to the market as a whole* is very high, the value *to an individual customer* investing in Bonneville Long Term Firm transmission service has sharply declined. The reduced incentive to invest in Long Term Firm transmission service on the Southern Intertie in turn jeopardizes Bonneville's ability to fund the costs of necessary and highly beneficial investments on the Bonneville system, or even to continue to recover the embedded costs of the existing facilities.

Reduced sales of Long Term Firm service on the Southern Intertie would be highly problematic for Bonneville and the region. For FY2017, over 95% of the $107 million total Southern Intertie transmission revenue is expected to be recovered from the sale of Long Term Firm service. If Long Term Firm sales decline, Bonneville will need to recover the lost revenue through the sale of other services on the Southern Intertie, such as Short Term Firm service. However, this can be a downward spiral: the fewer hours of short-term sales, relative to the hours of long-term sales, will require higher short-term rates to recover the necessary revenue, which in turn can further reduce the hours of short-term sales and require still higher rates. Ultimately, Bonneville may simply be unable to fully recover Southern Intertie revenue requirements from Southern Intertie customers, in which case those costs would be borne by customers on the main network.

The prospect of reduced sales of Long Term Firm service on the Southern Intertie is particularly alarming as Bonneville has embarked on an upgrade to the PDCI that will cost over $400 million. While Powerex agrees this is an important and necessary capital upgrade, it comes at a time when Bonneville's ability to recoup this investment through the continued sale of Long Term Firm service on the Southern Intertie is highly uncertain. The risk of being unable to pay for Southern Intertie investments through the sale of Long Term Firm service also creates a barrier to significant expansion of the Southern Intertie, which could address the region's oversupply challenges but would involve a much larger investment.[1]

Ultimately, major investments by Bonneville can only be economically justified if the costs are highly likely to be recovered from customers making long-term commitments to pay those costs. But as Powerex and other Bonneville transmission customers have experienced, it is increasingly difficult to justify making those long-term commitments due to the deterioration in the economic value that Long Term Firm customers actually receive. The very business model that Bonneville relies upon to fund investments in its transmission system has broken down on the Southern Intertie.

Bonneville's OATT Rules and Practices Fail to Achieve the Intended Objective due to Seams Issues with CAISO

As explained throughout the BP-16 rates workshops, the root cause of the deterioration in the value of Bonneville Long Term Firm service on the Southern Intertie is the seams issue between the Bonneville system and the CAISO system. In practice, due to the rules developed in recent years in the CAISO markets, the use of Bonneville's Southern Intertie facilities no longer requires or depends on having Firm scheduling priority. Instead, obtaining transmission service on the *CAISO* portion of the COI or PDCI is generally sufficient to obtain service on *Bonneville's* facilities. CAISO's market rules award transmission service based on offer price alone, and deliberately do *not* require (explicitly or implicitly) Firm transmission service to COB or NOB. Indeed, since the 2009 market re-design that made CAISO the central counterparty for all energy delivered to its grid, CAISO has taken several steps to permit and encourage participants to sell energy to CAISO at COB or NOB (and other interties) despite potentially lacking the transmission service necessary to deliver that energy.

CAISO pursues these efforts in order to increase "liquidity" in its markets, which is typically an uncontroversial and worthy objective in any market. However, increasing the quantity of energy that is economically offered at interties beyond the quantity that can physically be delivered merely inflates the congestion charges assessed by CAISO.[2] Additional economic offers beyond the quantity that can actually be scheduled to the delivery point do not increase total imports into CAISO—which are limited by transmission constraints—but they can determine which specific transactions are selected for import and which ones are not. This "re-shuffling" of economic transactions at the interties does not result in a more efficient dispatch of CAISO generation, and therefore does not change the clearing price of energy at locations inside the CAISO grid. Powerex is hopeful that, as CAISO seeks to increase its participation and understanding of the regional markets outside of California, it will also seek to contribute to more

[1] For comparison, the PDCI Upgrade will cost approximately $400 million, whereas Bonneville's cost of expansion is based on a 1,600 MW upgrade costing over $2.4 billion.
[2] The impacts of CAISO's policies extend beyond transactions with CAISO in its day-ahead or real-time organized markets. As the transmission provider for a majority of the capacity of the COI and PDCI south of COB and NOB, CAISO's market outcomes have a significant effect on the value of non-CAISO transactions—such as the value for a bilateral sale of energy at COB or NOB or the value of longer-term deals—which are strongly influenced by the expectations of CAISO market prices.

collaborative and coordinated solutions with other transmission providers in the region. Such inter-regional collaboration can best pursue the key shared objectives for the region's transmission infrastructure, including (1) full economic utilization of existing transmission assets; (2) timely and efficient expansion of the grid where appropriate; and (3) an appropriate and equitable allocation of the benefits of those investments, thus ensuring there are incentives to make those investments in the first place.

California load-serving entities are also clearly aware that CAISO's rules eliminate the importance of Firm scheduling priority for transmission service on Bonneville's Southern Intertie. In 2010, just a year after the implementation of CAISO's MRTU framework in 2009, Southern California Edison and Pacific Gas & Electric lobbied the California Public Utilities Commission *not to require* Firm transmission to NOB or COB (or any CAISO intertie) for renewable energy imported into California under long-term contract. PG&E explained the irrelevance of Firm transmission under the CAISO's new market design:

> It is important for the CPUC to recognize that ***firm transmission is not relevant for power imports into the CAISO-controlled grid***, which applies to the majority of renewable energy imports for California's [IOUs]. This is because all imports must competitively bid supply at the interties, and ***only the lowest price offers are accepted for scheduling by the CAISO, regardless of transmission quality***, dynamic transfer or firming and shaping arrangements. The ***CAISO does not place a scheduling priority for energy delivered via firm vs. non-firm transmission.***[3]

Southern California Edison echoed PG&E's explanation that Firm transmission was "not relevant" under the new CAISO market design, and argued that "long-term firm transmission is generally expensive, and is not cost-effective or efficient for many transactions."[4] This position runs directly counter to the OATT framework Bonneville has maintained for more than two decades, and to established federal OATT policies articulated by the Federal Energy Regulatory Commission (FERC).

It is undeniable that the functioning of the OATT framework is materially and adversely impacted in the context of deliveries to CAISO's organized markets. Nevertheless, CAISO's market rules have been approved as just and reasonable by FERC, and CAISO *arguably* has no obligation to adopt rules for the benefit of any interests outside of California. But CAISO's efforts to maximize liquidity at its borders, and the California load-serving entities' efforts to minimize their costs, ultimately rely on Bonneville taking a subordinate role to CAISO and making transmission service on <u>Bonneville's</u> system available for the transactions that <u>CAISO</u> selects. And in fact that is precisely what Bonneville's current practices do: rather than ensuring that the use of Bonneville's facilities is based on the priority established under Bonneville's open access rules, the use of Bonneville's facilities largely follows CAISO's determination of awards on CAISO's facilities. In effect, such outcomes nullify Bonneville's open access framework, causing economic harm to Bonneville's Long Term Firm transmission customers while undermining the viability of its business model for selling Long Term Firm transmission service.

<u>It is Appropriate and Necessary for Bonneville to Act Now to Restore the Proper Functioning of its OATT Framework</u>

Powerex, as well as Bonneville Power Services and other Long Term Firm customers, has unequivocally been harmed by the loss of economic value it receives in return for its investment in Long Term Firm

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[3] Pacific Gas and Electric's comments in re: *Order Instituting Rulemaking to Develop Additional Methods to Implement the California Renewables Portfolio Standard Program*, CPUC Rulemaking 06-02-012 April 30, 2010, at 8 (emphasis added).

[4] Southern California Edison's comments in re: Order Instituting Rulemaking to Develop Additional Methods to Implement the California Renewables Portfolio Standard Program, CPUC Rulemaking 6-02-012, April 30, 2010 at 8.

service on the Southern Intertie. The harm has occurred because the basic bargain struck between Bonneville and its Long Term Firm customers—to provide priority of service and therefore the economic value of the facilities to customers that fund the embedded cost—has broken down. Customers continue to live up to their obligations by paying for service in all hours, even in hours when there is no value or in hours when the facilities are derated or entirely unavailable. But due to the seams issue on the Southern Intertie, Bonneville is no longer providing effective priority to those customers, and those customers are no longer receiving the economic value of the facilities whose costs they fund. Decisive action by Bonneville is necessary not only to restore confidence in investing in Long Term Firm service on the Southern Intertie, but to assure transmission customers investing on *any* portion of Bonneville's system that Bonneville will protect the those investments from being undermined by rules developed by external entities. In the current dynamic market environment, multi-year, multi-million dollar transmission investments in Bonneville's system require that transmission customers have faith that Bonneville will actively ensure that the customers making those investments actually receive the priority of service and the associated economic value of the facilities whose costs they fund.

In the BP-16 rates workshops, Southern California Edison objected to what it characterized as Bonneville ensuring the profitability of transmission investments. This fundamentally misstates what Powerex seeks. This is not simply a case of investing in something that turns out to be worth less than expected. To the contrary, Powerex willingly accepts the risk that the economic value of Bonneville's Southern Intertie facilities may be <u>*high or low*</u>. But Powerex refuses to accept the risk that the economic value will improperly be received by entities outside of the region that make no contribution whatsoever to the embedded costs of Bonneville's facilities. That is precisely the outcome being experienced today, in which a disproportionate share of the economic value of transmission between the Pacific Northwest and California is collected via increased congestion charges on the CAISO side of the facilities and paid out, directly and indirectly, to California load-serving entities. Powerex expects that Bonneville—and indeed any transmission provider—will not stand idly by as external rule changes improperly de-value the transmission service that Bonneville has sold, and expects to continue to sell in the future.

It is unsurprising that Southern California Edison would oppose Bonneville taking any meaningful action to recognize—let alone address—the issue. As one of the largest load-serving entities in California, it receives the ongoing economic benefits of increased CAISO congestion charges, either through the Congestion Revenue Rights (CRRs) they are "allocated" by CAISO free of charge, or as a recipient of the market value of the remaining CRRs sold in the CAISO CRR auctions. Simply put, the higher the CAISO congestion charges, the greater the ongoing payments to Southern California Edison.

At the September 10 BP-16 rates workshop, Southern California Edison argued that Bonneville should do nothing about this issue until and unless Bonneville actually experienced a reduction in Long Term Firm sales on the Southern Intertie. This approach would continue to provide a significant portion of the economic value of Bonneville's Southern Intertie facilities to entities that are not funding the embedded costs of those facilities. This "do nothing" approach is also a recipe for the Southern Intertie to become under-subscribed prior to Bonneville taking any action. The Southern Intertie would likely remain under-subscribed for the extended period of time required for Bonneville to develop and implement new measures to restore its OATT framework, for those new measures to be demonstrated to address the problem, and for the credibility of Bonneville's commitment to its Long Term Firm transmission customers to be re-built.

Powerex recognizes that whether each individual Bonneville customer will continue to invest in Long Term Firm Southern Intertie transmission—and at what level—will not be known until the date that each respective investment decision must be made. However, as Bonneville previously reported, over 3,000 MW of existing transmission reservations will expire during the next two fiscal years. While it is *possible* that Bonneville might experience a *gradual* decline in demand for Long Term Firm service on the Southern Intertie, Southern California Edison's "do nothing" strategy is more likely to result in a rapid and large drop in Long Term Firm sales in the coming years. This is because the sharp decline in the economic value of Long Term Firm transmission resulting from the seams issues with CAISO is not isolated to any one transmission customer. Both Powerex and Bonneville Power Services have made it clear that the value of their Long Term Firm transmission investments have been severely impacted, while other Long Term Firm customers have also raised concerns. The evidence of the deteriorated value of Long Term Firm service on the Southern Intertie is clear and compelling, and action by Bonneville is needed now.

This is not the first time Bonneville has had to act to protect the region's interest in the value of the Southern Intertie. In the early 1980s a similar value shift was occurring and Bonneville took significant steps to address the problem. As a Bonneville *Issue Alert* pointed out back then:

> Despite the Northwest having paid for its portion of the lines, use of the California Intertie no longer produces roughly equal benefits for the Northwest and California, as originally intended by Congress. Recent developments have tilted benefits heavily in favor of California.[5]

Back then, Bonneville concluded not only that it had the *right* to make changes to address the value shift, they had an *obligation* to do so. A similar value shift is occurring today, and Bonneville should once again take decisive action to address it.

<u>Re-Calculating the Hourly Non-Firm Rate on the Southern Intertie to Discourage Cherry-Picking</u>

Numerous potential measures have been discussed that could restore the proper functioning of Bonneville's OATT framework on the Southern Intertie. However, many of those measures appear to go beyond the scope of the BP-16 transmission rate proceeding, which is ultimately focused on determining the appropriate cost-based rate for service. Powerex proposed that the rate for Hourly Non-Firm service on the Southern Intertie be re-calculated in recognition that such service is not used 80 hours per week, as assumed under the existing rate formula, but is actually used in a far smaller number of hours. A change to the underlying usage assumption from 80 hours per week to 20 hours per week would result in a BP-14 rate of $12.98/MWh, as opposed to the actual rate of $3.25/MWh. At the higher rate, the annual contribution to Southern Intertie embedded costs of a customer using Hourly Non-Firm service an average of 20 hours per week would be comparable to the annual contribution from a Long Term Firm customer, who is required to pay for service in every hour of the year. This parity of annual contributions between long-term and short-term customers is the objective underlying the current rate formula; Powerex merely proposes to update the formula with more accurate forecasts of usage.

While the rate change does not directly restore the priority of Firm transmission service on the Southern Intertie, it is the loss of that priority that makes it especially important to get the Hourly Non-Firm rate right on the Southern Intertie. Firm and Non-Firm service on the Southern Intertie are not meaningfully different given the current seams issues, and customers can therefore choose the duration of service that leads to the lowest cost, regardless of scheduling priority. This creates the opportunity for "cherry picking"—purchasing hourly service only in the hours that it is most valuable, avoiding any costs in the hours when it is less valuable.

Importantly, the need to update the rate for Hourly Non-Firm service on the Southern Intertie to prevent cherry-picking does not have implications for short-term rates elsewhere on the Bonneville transmission

[5] See BPA Issue Alert July 1984, page 7

system. On the Bonneville Integrated Network as well as on the other interties, scheduling priority continues to be a meaningful distinction between Firm and Non-Firm service, and customers consider more than just the rate when evaluating the transmission service they request from Bonneville. In other words, cherry-picking is not a concern elsewhere on the Bonneville system because the Firm and Non-Firm products are *not* interchangeable. Consequently, Powerex believes that measures to discourage cherry-picking are necessary only for service on the Southern Intertie.

A Comprehensive Response Requires Additional Non-Rate Measures on the Southern Intertie

Powerex's proposed change to the BP-16 Hourly Non-Firm Southern Intertie rate will not resolve the Southern Intertie issues. A comprehensive response to the problem will require additional non-rate measures, which necessarily must be developed outside of the BP-16 rate process. Powerex appreciates that Bonneville has already proposed three non-rate measures for customer consideration.[6] Powerex offers these brief preliminary comments on those measures:

- **Use the transmission allocation profile—and not the energy profile—on an e-Tag to determine if a Firm reservation has been "used".** Powerex believes this could be an effective measure, but only for transactions in which the transmission profile and energy profile are different, such as for some intra-hour transactions or for bids into the CAISO's Fifteen Minute Market. While 15-minute scheduling is expected to be enabled on the COI this fall, 15-minute scheduling will not be enabled on the PDCI for at least two years. Consequently, this proposed measure would only potentially affect service on the COI, but not on the PDCI. Powerex therefore supports further consideration of this approach, but recognizing additional measures will be necessary.

- **Release unused Firm transmission at T-60, rather than at 10 p.m. of the day prior to delivery.** Powerex does not believe this would make any meaningful difference, absent other measures. This proposal would still result in Firm capacity on *Bonneville's* system being re-sold as Non-Firm service based on the results of *CAISO's* market.

- **Sell Hourly Non-Firm only if there is insufficient Long Term Firm available for re-sale on OASIS.** Powerex believes this option has considerable potential, and should be explored further. A robust secondary market would permit Long Term Firm customers to realize the economic value of Bonneville's Southern Intertie facilities even if they are not the entity that physically flows energy to COB or NOB. Since the Southern Intertie is fully sold on a Firm basis, the rights to schedule the full capacity of those facilities is already in transmission customers' hands, and the secondary market is the appropriate vehicle through which those rights are obtained by the customers seeking to schedule energy. Bonneville's injection of additional, duplicative scheduling rights undermines this secondary market, and it appears appropriate to limit such additional sales to instances in which the secondary market is clearly not functioning properly. Under this framework, Powerex supports Bonneville continuing to sell Hourly Non-Firm transmission service if there are no secondary offers of Firm service posted to Bonneville's OASIS.

Bonneville Should Immediately Convene a Customer Process to Formally Recommend Non-Rate Measures

The deterioration of value experienced by Long Term Firm customers on the Southern Intertie will not be reversed without decisive action by Bonneville. A failure to take such action will continue to harm existing

[6] *See* Bonneville's "Southern Intertie Discussion", September 10, 2014 at slide 11.

transmission customers, including Bonneville Power Services itself. Both the analysis by FTI Consulting, as well as data provided by Bonneville Power Services at the workshop, illustrate that this economic harm is large and ongoing.

It is clear from the recent workshops that Bonneville Transmission has now become fully aware that its OATT framework on the Southern Intertie has broken down. Customers continue to pay for their long-term commitments on the Southern Intertie, yet they fail to receive effective priority to use, nor the economic value of, the facilities they fund. Failure to take timely and decisive steps to correct the situation will send a powerful message regarding Bonneville's level of commitment to protecting the priority and value of customers' ongoing investments in Long Term Firm transmission service under its OATT framework.

Powerex therefore requests that Bonneville convene a customer consultation initiative to develop and recommend a package of non-rate measures that will ensure Long Term Firm customers receive the economic value of Bonneville's Southern Intertie facilities. Powerex recommends that this process begin immediately, and continue with regular meetings with the objective of formally recommending specific business practices as soon as possible, and no later than the end of 2014.