**UNITED STATES OF AMERICA**
**DEPARTMENT OF ENERGY**
**BEFORE THE**
**BONNEVILLE POWER ADMINISTRATION**

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| **Fiscal Years 2018-2019 Proposed** | **)** | **BPA Docket No. BP-18** |
| **Power and Transmission Rate** | **)** | |
| **Adjustment Proceeding** | **)** | |

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**INITIAL BRIEF OF:**

**PUBLIC POWER COUNCIL**

**and**

**POWEREX CORP.**

**as**

**JOINT PARTY 1**

SUBJECT: SOUTHERN INTERTIE HOURLY RATES

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May 2, 2017

# INITIAL BRIEF OF JOINT PARTY 1

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# INITIAL BRIEF OF JOINT PARTY 1

**SUBJECT: Southern Intertie Hourly Rates**

The Public Power Council ("PPC") and Powerex Corp. ("Powerex"), together designated as Joint Party 1 ("JP01"), file this initial brief regarding Bonneville Power Administration's ("BPA") proposed rates for hourly service on the Southern Intertie. This initial brief follows the direct and rebuttal testimony filed by JP01 (BP-18-E-JP01-01 and BP-18-E-JP01-02) in support of BPA Staff's proposal to revise the Southern Intertie hourly rates (BP-18-E-BPA-12 and BP-18-E-BPA-25) in response to concerns about the ability of BPA to recover the costs of the Southern Intertie segment.

## I. EXECUTIVE SUMMARY

JP01 urges the Administrator to adopt BPA Staff's proposal, broadly supported by BPA's customers, to increase the hourly rates on the Southern Intertie. The appeal of long-term firm ("LTF") service on the Southern Intertie has been declining. A key cause of this decline is the market design of the California Independent System Operator ("CAISO"), which grants awards for deliveries into its market without regard to the seller's transmission priority under BPA's Open Access Transmission Tariff ("OATT"). Thus, sellers into the CAISO market can rely on hourly service at lower total cost, avoiding the long-term commitment and cost associated with LTF service. This "seam" created by the different transmission rules, together with the more recent reduction in the number of hours of peak net demand in California, have diminished the value of LTF service, as reflected in customer input during BPA Staff's extensive regional stakeholder process and as manifested in the shrinking queue for LTF service on the Southern Intertie.

Facing this precipitous decline in the queue and concerns about customers' willingness to invest in LTF service, BPA Staff proposed to update a single number in the formula used to set the hourly rates on the Southern Intertie to reflect current demand patterns in California. Demand in California has been affected by increasing amounts of solar generation that reduces net load in the middle of the day, which has shifted and reduced the number of high-value hours for imports into California to just 5 hours in the evening peak. By updating the existing assumption of 16 heavy load hours to 5 hours in its formula, BPA will increase the Southern Intertie hourly rate and re-incentivize customers to purchase LTF service. This incentive will improve the likelihood of BPA's continued cost recovery on the Southern Intertie, in accordance with its statutory requirements.

## II. IDENTITIES AND INTERESTS OF JOINT PARTY 1

Public Power Council's members are BPA's preference customers that purchase network transmission service for delivery of power. PPC members pay for long-term firm capacity that BPA Power Services holds on the Southern Intertie. PPC members also pay for BPA Power Services' short-term transmission purchases on the Southern Intertie. PPC members pay the costs of these transmission products through BPA's power rates.

Powerex markets power exported from the surplus capability of the predominantly hydropower generation facilities of its parent the British Columbia Hydro and Power Authority. Powerex also markets power from its own portfolio of third-party power purchases. Powerex sells and purchases power throughout the Western Interconnection, including in the CAISO organized markets and with bilateral customers in California. Powerex is one of BPA's largest transmission customers, and has invested in substantial LTF transmission reservations on the Southern Intertie.

## III. BPA STAFF'S PROPOSAL IS AN APPROPRIATE REMEDY TO BPA'S RISK OF UNDER-RECOVERY ON THE SOUTHERN INTERTIE

Statutory directives mandate that BPA set its rates in accordance with sound business principles to recover the costs of transmission of electric power.[1] These directives focus on cost recovery but do not restrict the Administrator to any particular rate design methodology because the Administrator has broad discretion in implementing the statutory ratemaking directives.[2] Indeed, the Ninth Circuit Court of Appeals has been clear that BPA is entitled to deference in ratemaking decisions, even where BPA may be perceived to have an economic interest in the outcome.[3]

### A. Changes in California Have Put in Jeopardy BPA's Ability to Recover the Costs of the Southern Intertie Segment

BPA Staff testified that "BPA depends on sales of long-term firm service to recover the majority of the costs of the Southern Intertie."[4] This is a key principle in this proceeding. BPA Staff also testified that the agency is facing termination of a "significant amount of its existing contracts for long-term firm service on the Southern Intertie."[5] Given BPA's reliance on sales of long-term firm transmission service to recover the costs of the Southern Intertie segment, BPA Staff are rightly concerned that the agency is at risk of under-recovering its costs in the BP-18 rate period and that the risk "has increased since the BP-16 rate case" to the point that a change to the hourly rates "is necessary."[6] Indeed, during the upcoming BP-18 rate period nearly half of existing

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[1] Pacific Northwest Electric Power Planning and Conservation Act, § 7(a)(1), 16 U.S.C. § 839e(a)(1) (2012); Federal Columbia River Transmission System Act § 9, 16 U.S.C. § 838g (2012).
[2] *Pub. Power Council v. Bonneville Power Admin.*, 442 F.3d 1204, 1209 (9th Cir. 2006) (citation omitted).
[3] *California Energy Com'n v. Bonneville Power Admin.*, 909 F.2d 1289 (9th Cir. 1990) (citation omitted); *see also Bonneville Power Admin.*, 147 FERC ¶ 61,053 at PP 9-11 (2014) (stating that FERC's review of BPA's rates is limited to determining whether the proposed rates comply with the three prongs of Section 7(a)(2) of the Northwest Power Act and stating that FERC's role is appellate in nature: affirming or remanding the rates submitted for review).
[4] *Fredrickson et al.*, BP-18-E-BPA-12 at 4. For simplicity, reference to and discussion of transmission services herein refers to service on BPA's Southern Intertie segment, unless otherwise noted.
[5] *Id.*
[6] *Id.*

LTF service on the Southern Intertie will terminate unless customers decide to renew their service,[7] and since September of 2014, the requests for new LTF service have decreased by 5,226 MW.[8] These figures, along with customer feedback that LTF service on the Southern Intertie is not as attractive as it once was, have BPA Staff "concerned" that this might be "the start of [a] trend where customers with pending requests are rejecting offers of long-term firm service."[9]

The decreased demand for Southern Intertie LTF service and the growing risk of under-recovery in the BP-18 rate period is driven primarily by two external factors. First, integration of large amounts of solar generation has changed the daily net load shape in California.[10] The change in the daily net load shape has reduced the demand for imports during the afternoon, which has effectively reduced the number of daily high-value hours from 16 (the traditional "heavy load hours") to just a handful of hours in the early evening.[11] Not only is this a current trend, but BPA Staff testified that "BPA anticipates that the trend of decreasing net load in the middle of the day will continue."[12] The now obsolete assumption of 16 heavy load hours was the basis of BPA's Southern Intertie hourly rate in the BP-16 rate proceeding.[13]

Second, California market rules have further reduced the incentive for BPA customers to purchase LTF transmission on the Southern Intertie under the current rate structure. Under the OATT framework, congestion is resolved according to priority of transmission service: firm reservations flow ahead of non-firm reservations.[14] On the Southern Intertie, however, congestion is largely resolved by the CAISO.[15] Uniquely, the CAISO day-ahead market, where most of the

[7] *Id*. at 8.
[8] *Id*. at 7.
[9] *Id*. at 8.
[10] *Id*. at 4-5.
[11] *Id*.
[12] *Id*. at 5.
[13] *Id*. at 4-5.
[14] *Deen and Wellenius*, BP-18-E-JP01-01 at 5.
[15] *Id*.

generation needed to meet California demand is acquired, "does not require that participants have firm transmission to submit a bid to sell into the market, nor does the market consider the difference in transmission priority between firm and non-firm transmission when awarding bids."[16]

In other words, customers can reserve non-firm service on BPA's Southern Intertie and flow ahead of customers who made long-term investments in firm service. This allows customers to bid into CAISO's day-ahead market without purchasing BPA transmission, acquire the lower-cost non-firm transmission only for the hours in which they receive a day-ahead award, and flow ahead of customers with firm transmission.[17] This, in turn, is likely to preclude customers who invested in LTF service on the Southern Intertie from being able to schedule up to their full rights.[18] In essence, the current CAISO rules, coupled with the relatively low BP-16 hourly rate, allow sellers to use hourly non-firm transmission service to 'cherry pick' the reduced number of high-value hours at significantly lower total cost than is paid by LTF customers.[19] Naturally, this practice "reduces the incentive to purchase long-term firm under the current rate structure."[20]

B. <u>BPA Staff's Rate Proposal Appropriately Responds to the Changes in California and Strengthens Incentives for Customers to Invest in LTF Service</u>

In response to these seams issues, BPA Staff have proposed to update the formula BPA used in BP-16 rate proceeding and calculate the hourly rates on the Southern Intertie "to reflect that the number of heavy load hours has been reduced due to changes of the generation mix in

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[16] *Fredrickson et al*., BP-18-E-BPA-12 at 5. A similar concerns arises for deliveries to California markets other than CAISO due to the downstream transmission provider establishing priority pursuant to its own scheduling priorities, not BPA's.
[17] *Id*. at 5-6; *Deen and Wellenius*, BP-18-E-JP01-01 at 5.
[18] *Deen and Wellenius*, BP-18-E-JP01-01 at 5; 14 (explaining that BPA resells as non-firm service the firm transmission capacity on the Southern Intertie that has been reserved but not scheduled, thus customers that receive an award from the CAISO can anticipate that non-firm transmission will become available and effectively prevent long-term firm customers from scheduling on their reservations).
[19] *Id*. at 5; *see also Fredrickson et al*., BP-18-E-BPA-12 at 6.
[20] *Fredrickson et al*., BP-18-E-BPA-12 at 6; *see also Deen and Wellenius*, BP-18-E-JP01-01 at 5-6.

California."[21] Specifically, instead of continuing to rely on the outdated figure of 16 heavy load hours per day or 80 hours per week, BPA Staff propose to use the more current figure of 5 hours per day or 25 hours per week.[22] This is because the changes in California's generation mix "have effectively decreased the number of heavy load hours in California to 25 hours per week."[23] Under BPA Staff's proposal, the rate for hourly firm and non-firm service would increase to 11.49 mills per kWh.[24]

Other than accounting for the reduction in California's heavy load hours, BPA Staff maintained the same fundamental rate design and cost-based rate methodology that BPA used in BP-16 and prior cases. The objective behind the rate remains the same: "to ensure that customers that decide to reserve transmission only during the periods when California net loads are the highest pay the same amount as long-term firm customers that have the right to schedule transmission 24 hours a day."[25] Under Staff's proposal, long-term and short-term users of the Southern Intertie would equitably contribute to the cost of service on the Southern Intertie because customers that reserve 1 MW of hourly transmission during the 25 high-value hours per week would pay the same as customers purchasing 1 MW of long-term firm transmission. Thus, BPA Staff's proposal equitably allocates the costs of the Southern Intertie to the users of that segment while adjusting for the practical circumstances affecting the use of that segment.

BPA Staff's proposal helps to restore the incentive for customers to continue to invest in LTF transmission service, thus protecting BPA's ability to recover the costs of the Southern Intertie segment. There are three broad reasons for customers to invest in LTF service under the

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[21] *Fredrickson et al.*, BP-18-E-BPA-12 at 9.
[22] *Id.*
[23] *Id.* at 10.
[24] *Id.*
[25] *Id.* at 9.

OATT framework instead of relying on hourly non-firm service.[26] First, reserving LTF service secures transmission service, which may or may not be available on an hourly basis. Second, LTF service generally provides higher scheduling priority than hourly non-firm service. And third, depending on how many hours the customer schedules on its transmission reservation, LTF may be more cost-effective than hourly service. While these reasons encourage transmission customers to invest in LTF service in most cases, as a result of the seams issues, *none* of these reasons currently applies on the Southern Intertie.

BPA Staff's proposal is specifically designed to restore the financial incentive for transmission customers to continue to invest in LTF service on the Southern Intertie instead of relying on hourly service.[27] Under the current BP-16 rates, LTF service on the Southern Intertie is more financially attractive than the hourly service only if a customer intends to schedule on its LTF reservation in more than 80 hours per week (16 hours per day, 5 days per week). Under BPA Staff's proposed hourly rate, customers that reserve hourly non-firm transmission in 25 hours per week (5 hours per day, 5 days per week) would pay the same amount as LTF customers that have the right to schedule transmission in any hour of the year. Thus, customers that intend to schedule on their transmission reservation in more than 25 hours per week have a financial incentive to invest in the LTF product. Indeed, maintaining the financial incentive for customers to continue to invest in LTF service, which BPA uses to recover the majority of costs of the Southern Intertie segment, was precisely the intent of BPA Staff's proposal.[28]

[26] *Deen and Wellenius*, BP-18-E-JP01-01 at 14.
[27] *Id*. at 15-16.
[28] *Fredrickson et al*., BP-18-E-BPA-12 at 8; BP-18-E-JP01-03 at 2 (Response to Data Request PP-BPA-26-62)("BPA staff is proposing modifying its rate design to incent customers to continue to take long-term firm service on the Southern Intertie and reduce the risk of under recovery").

## IV. THE ADMINISTRATOR HAS SUBSTANTIAL EVIDENCE TO ADOPT STAFF'S SOUTHERN INTERTIE PROPOSAL

### A. Ample Objective Evidence in This Record Supports BPA Staff's Proposal, Including Information from BPA Staff's Extensive Regional Stakeholder Process

The Northwest Power Act provides that the Administrator shall make a final decision establishing rates based on the record developed in the rate case proceeding and his decision shall include a complete justification of the final rates.[29] In basing his decisions on the rate case record, the Administrator necessarily weighs the evidence presented to determine whether it is adequate to support a particular conclusion.[30] As demonstrated below, the Administrator has compelling and substantial evidence to adopt BPA Staff's proposal.

To provide relevant background, in the BP-16 Final Record of Decision the Administrator noted his belief "that seams issues exist and must be addressed."[31] However, the Administrator was reluctant to adopt a ratemaking solution in that case until the agency could "seek clarity on the extent of the issue, conduct a broader examination of seams issues with the involved parties, and evaluate both ratemaking and non-ratemaking solutions."[32] Although the Administrator acknowledged customers' concerns that BPA was at risk of losing revenues in the future, the Administrator determined there was not sufficient evidence in that record to warrant adoption of a ratemaking solution.[33] Indeed, in the BP-16 rate proceeding, BPA Staff had testified that despite the CAISO's market rules, "the Southern Intertie remains fully subscribed in the southbound direction, and BPA has a long queue of customers waiting for capacity."[34] Nonetheless, the

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[29] 16 U.S.C. § 839e(5).
[30] Administrator's Final Record of Decision, BP-14 Power and Transmission Rate Proceeding, BP-14-A-03, at 13 (July 2013).
[31] Administrator's Final Record of Decision, BP-16 Power and Transmission Rate Proceeding, BP-16-A-02 ("BP-16 ROD"), at P-2 (July 2015).
[32] *Id*. at P-2, 112.
[33] *Id*. at 111-112.
[34] *Id*. at 111 (citing *Linn et al.*, BP-16-E-BPA-31 at 4); *see also Fredrickson et al.*, BP-18-E-BPA-12 at 6.

Administrator committed the agency to hold a series of workshops to explore the seams issues raised by the customers, as well as potential rates and non-rates options to address the issues.[35]

1. Evidence Gathered, Analyzed, and Presented by BPA Staff

Much has changed since the BP-16 rate case. BPA Staff testified here that it "is no longer the case" that "'the Southern Intertie remains fully subscribed'" or that "'BPA has a long queue of customers waiting for capacity.'"[36] In fact, BPA Staff testified that since BP-16, "the amount of megawatts in the queue is greatly reduced, and some customers are choosing not to accept new offers of long-term service," which "could be due in part to the CAISO's market rules."[37] What has also changed since BP-16, according to BPA Staff, "is [its] analysis on the Southern Intertie regarding the duck curve, intertie loadings, and California net load data that indicates a fundamental shift away from the traditional definition of 'on-peak' hours."[38]

BPA Staff did not arrive at these conclusions suddenly or without good basis. Following the conclusion of the BP-16 rate proceeding and true to the Administrator's commitment, BPA conducted an extensive regional consultation process "to see what actions (if any) it should take to make sure [LTF] service on the Southern Intertie remains viable and its customers receive an equitable share of the economic benefits provided by the Southern Intertie."[39] As part of the process, BPA Staff conducted many publicly-noticed workshops. There, BPA Staff made and encouraged interested parties to make presentations, analyzed and encouraged stakeholders to analyze available data, and evaluated a variety of rate alternatives. BPA Staff's regional

[35] *Id*. at 112.
[36] *Fredrickson et al*., BP-18-E-BPA-12 at 6 (citing the BP-16 ROD at 111).
[37] *Id*. at 6.
[38] *Linn et al*., BP-18-E-BPA-25 at 10-11.
[39] BP-18-E-JP01-03 at 14 ("Presentation and Analysis of Southern Intertie Hourly Non-Firm Alternatives," Regional White Paper, February 16, 2016); *see also Linn et al*., BP-18-E-BPA-25 at 5-6.

consultation process culminated in the publication of a Regional White Paper on the issue, following several rounds of stakeholder meetings and opportunities for written comments.[40]

One objective of BPA's regional consultation process was "to allow customers and stakeholders to communicate their views and interests directly to BPA in public forum."[41] A broad variety of BPA's customers, including public power, power marketers, and renewable energy developers, took the opportunity to express their growing concerns that LTF transmission rights on the Southern Intertie no longer had the value they once had, and for that reason, they would not renew LTF service or would remove their requests for new LTF service from the queue.[42] The foregoing concerns were raised not just by Powerex, but also by Tacoma Power, Morgan Stanley, Avangrid Renewables, Northwest Requirements Utilities, PPC, and the Industrial Customers of Northwest Utilities, among others.[43] This collection of stakeholders represented a broad spectrum of BPA's customer base.[44]

In fact, a presentation made by FTI Consulting as part of the regional consultation process, which is now part of the record in this proceeding, offered uncontroverted evidence that in the past several years, the seams issues on the Southern Intertie (1) harmed customer investment in BPA's LTF service; (2) reduced demand for BPA's LTF service; (3) increased reliance on hourly non-firm service; and (4) put BPA at risk of under-recovering its costs.[45] Notably, no members of Joint Party 3 ("JP03") – the only party now opposing BPA Staff's proposal – chose to participate in BPA's regional consultation process.[46]

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[40] *See* BP-18-E-JP01-03; *see also Deen and Wellenius*, BP-18-E-JP01-01 at 17.
[41] *Linn et al*., BP-18-E-BPA-25 at 5.
[42] *See id*. at 5-6.
[43] *Id*. at 6.
[44] *Id*.
[45] BP-18-E-JP03-13 ("Seams Issues on BPA's Southern Intertie," FTI Consulting Presentation at 20 (September 29, 2015)), admitted by BP-18-HOO-31.
[46] Sacramento Municipal Utility District ("SMUD"), now a member of JP03, submitted comments in August 2016, well after the public stakeholder process had concluded.

Ultimately, BPA Staff concluded in the Regional White Paper that: (1) BPA needs to take actions to protect the value of LTF transmission service on the Southern Intertie; (2) "a bundle of rate and non-rate solutions would be most effective;" and (3) "[i]n the BP-18 Initial Rate Proposal, BPA will propose a new methodology for the [hourly non-firm Southern Intertie] rate" supported by the factors examined during the consultation process.[47] BPA's complete White Paper is part of the record in this proceeding.[48] Following the conclusion of the regional consultation process and prior to the commencement of this proceeding, BPA held pre-rate case workshops focusing on the particulars of BPA Staff's expected rate proposal and, once again, inviting customers to comment.[49]

The entirety of the work done since the conclusion of the BP-16 rate proceeding led BPA Staff to believe that the agency must address the seams issues on the Southern Intertie with a targeted rate solution. Specifically, BPA Staff testified that the objective evidence they presented in this case regarding the net load in California (i.e., the "duck curve") and intertie loadings, in combination with customers' statements about the reduction in the size of the queue and LTF rights renewals, led BPA Staff to conclude that they should change how BPA calculates hourly rates on the Southern Intertie.[50] JP03, having not attended the agency's extensive consultation process, now urges the Administrator to ignore the conclusions of that process and decide the issue in JP03's favor.

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[47] BP-18-E-JP01-03 at 90 ("Presentation and Analysis of Southern Intertie Hourly Non-Firm Alternatives," Regional White Paper, at 77 (February 16, 2016)).
[48] *Id*. at 14.
[49] *Linn et al*., BP-18-E-BPA-25 at 5.
[50] *Id*. at 10-11.

2. Evidence Gathered, Analyzed, and Presented by JP01

PPC and Powerex are rate case parties with a joint interest in ensuring that BPA appropriately recovers the costs of the Southern Intertie facilities from the users of those facilities. PPC and Powerex were among the parties in BP-16 warning the agency of the declining value of LTF service on the Southern Intertie and the agency's increasing risk of under-recovery of the embedded costs of the Southern Intertie. They were also among the customers participating in the agency's regional consultation process and BPA's pre-rate case workshops. JP01 submitted direct and rebuttal testimony in this proceeding in support of BPA Staff's proposal.

In its testimony, JP01 presented independent evidence that BPA Staff's concerns regarding the value and future sales of LTF service on the Southern Intertie are amply supported by objective public data.[51] As discussed in more detail below, JP01 witnesses cited specific growing evidence of declining customer demand for LTF service on the Southern Intertie: (1) BPA's queue for new LTF service has declined sharply; (2) customers have withdrawn their requests from the queue; (3) customers have declined to renew expiring LTF service; and (4) customers have rejected offers of LTF service when it was offered by BPA.[52] Based on that evidence, JP01 concluded that BPA Staff is "correct" to propose corrective rate measures to strengthen incentives for customers to choose LTF service on the Southern Intertie.[53]

In addition, JP01 expert witnesses analyzed BPA Staff's specific rate proposal and concluded that it is cost-based and consistent with BPA's longstanding rate design methodology.[54] In fact, having independently analyzed the changes in California, JP01's expert witnesses concluded that BPA Staff's proposed use of a 25-hour value for heavy load hours was

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[51] *Deen and Wellenius*, BP-18-E-JP01-02 at 3-10.
[52] *Id*.
[53] *Id*. at 10.
[54] *Id*. at 10-13; *Deen & Wellenius*, BP-18-E-JP01-01 at 19-20.

conservative[55] and well within other cost-based benchmarks.[56] JP01's witnesses also presented evidence that other transmission providers (including, coincidentally, certain members of JP03) have established tariff rates for service on the southern portions of California Oregon Intertie facilities at levels similar to BPA Staff's proposed hourly rate on BPA's Southern Intertie.[57] Finally, JP01 witnesses presented independent analysis that BPA Staff's rate proposal mitigates the potential for unintended adverse consequences, concerns about under-utilization of the Southern Intertie, stable revenue recovery, or the availability of other solutions for addressing seams issues on the Southern Intertie.[58] Although the specific evidence presented by BPA Staff and JP01 in this proceeding is discussed in greater detail below, it is clear that ample objective evidence supports BPA Staff's rate proposal.

B. Southern Intertie Queue Data Supports BPA's Concern about Cost Recovery

Both BPA Staff and JP01 presented substantial evidence and analyses concerning the queue for LTF service and renewals on the Southern Intertie that reveal significant financial risks to BPA. First, the queue for new LTF service on the Southern Intertie is declining. That queue has varied over the years, reaching over 11,000 MW in 2009,[59] but has dropped recently from 6,228 MW in September 2014 to 1002 MW at the start of the BP-18 rate case.[60] The queue has declined further still: at the end of 2016 there remained only 812 MW of requests for new LTF service,[61] and between January 2017 and March 2017 the queue declined an additional 200 MW.[62]

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[55] *Deen and Wellenius*, BP-18-E-JP01-01 at 20-24.
[56] *Id*. at 24-25.
[57] *Id*.
[58] *Id*. at 25-29.
[59] *Linn et al*., BP-18-E-BPA-25 at 4.
[60] *Fredrickson et al*., BP-18-E-BPA-12 at 7. Even JP03 agrees that requests for LTF service have declined sharply since the BP-16 rate proceeding. *Holcomb et al.*, BP-18-E-JP03-01 at 18.
[61] *Deen and Wellenius*, BP-18-E-JP01-01 at 7.
[62] *Linn et al*., BP-18-E-BPA-25 at 5. For instance, in December 2016, Portland General Electric withdrew its only remaining request for original service (100 MW) and Cargill declined a LTF service offer of 50 MW. *Deen and Wellenius*, BP-18-E-JP01-01 at 8.

Second, customers are rejecting BPA's offers of LTF service. A queue customer is not obligated to accept an offer of LTF service and is free to decline BPA's offer when made. Indeed, 460 MW was removed from the queue during the BP-16 rate period because customers rejected BPA's offers of service.[63] On the DC Intertie, there are five requests in the queue, though two are associated with customers that have recently rejected offers of service on the AC Intertie.[64] This past behavior of customers in the queue makes it evident that BPA's actual ability to sell LTF service may be well below the amount of requests in the queue, which itself is already greatly diminished.

Third, the upcoming BP-18 rate period will see numerous terminations of LTF service unless those customers renew. Specifically, 2,801 MW of LTF service (out of a total of 5,715 MW of BPA's North-to-South capacity) will terminate by the end of the BP-18 rate period unless customers decide to renew service.[65] But, BPA's exposure is even greater because a transmission customer must inform BPA of its intent to renew at least one year prior to the date of termination. With this consideration, the quantity of LTF transmission reservations that either expire or face renewal during the BP-18 rate period is 3,158 MW, more than half of the Southern Intertie capacity.[66]

BPA Staff have compelling grounds to link the decline in the Southern Intertie queue to the erosion of value of LTF service, contrary to JP03's assertions.[67] As described above, BPA Staff held an extensive process evaluating various alternatives and remedies for the seams issues

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[63] *Fredrickson et al.*, BP-18-E-BPA-12 at 8. For example, Cargill has one other pending request, and if declined, the queue on the AC Intertie would consist only of a request from Avangrid, which also declined service the last time it was offered. *Deen and Wellenius*, BP-18-E-JP01-01 at 8; *Fredrickson et al.*, BP-18-E-BPA-25 at 7 (noting that the AC Intertie presently has two requests in the queue, both of which were submitted by customers that recently rejected offers of service).
[64] *Linn et al.*, BP-18-E-BPA-25 at 7.
[65] *Id*. at 14-15.
[66] *Deen and Wellenius*, BP-18-E-JP01-01 at 9.
[67] *Holcomb et al.*, BP-18-E-JP03-01 at 18.

between BPA and CAISO. When BPA Staff proposed to revise the Southern Intertie hourly rates, they did so in the context of the agency's consultation process and comments received. This context and background, as summarized in BPA Staff's rebuttal testimony,[68] sufficiently ties the explicit customer concerns about the erosion of value of LTF service to the decreased appetite for this service, reflected in the diminishing queue for LTF service. There is no further need to query every customer as to why it withdrew a particular request for LTF service from the queue, declined a specific offer of LTF service when provided, or renewed (or did not renew) expiring service since this would be duplicative to the agency's process.[69] The Administrator needs no further study or documentation to adopt BPA Staff's proposal.

The renewal rate for LTF service on the Southern Intertie has historically been high, and even reached 100 percent during FY 2016, as highlighted by JP03.[70] However, this single data point should provide no comfort for two reasons. First, by examining a longer time period, FY 2011-2016, the historical renewal rate is less than 100 percent.[71] The small quantity of requests for new service creates a risk of under-recovery even if renewal rates are only slightly below 100 percent. And second, customers renewing LTF service in FY 2016 may well have been informed by the agency's commitments in the BP-16 Final ROD (issued on July 23, 2015) to holding a process to address the erosion of value issue, and by staff's indications in that process that it would propose an increase in the hourly rate.[72]

BPA is facing considerable uncertainty as to whether it will recover the costs of the Southern Intertie segment. In contrast to prior rate cases, the queue for new LTF service now

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[68] *Linn et al*., BP-18-E-BPA-25 at 4-6, 8-9, 14
[69] *Holcomb et al*., BP-18-E-JP03-01 at 18 (asserting that BPA does not know the reasons for the decline in the net size of the queue).
[70] *Linn et al*., BP-18-E-BPA-25 at 10.
[71] *Deen and Wellenius*, BP-18-E-JP01-02 at 8.
[72] BP-16 ROD at 112.

offers virtually no buffer should LTF customers not renew at very high levels, especially as BPA is facing possible renewals of nearly half of the Southern Intertie capacity during the upcoming rate period.[73] Even a few non-renewals could result in unsubscribed capacity on the Southern Intertie and a corresponding drop in the revenues.[74] That revenue risk is causally linked to customer concerns about the erosion of value of LTF service. To ignore the substantial evidence presented by BPA Staff and JP01 would perpetuate the outdated low hourly rate on the Southern Intertie and make unrealistic assumptions in setting rates.[75]

In contrast, JP03 contends that BPA should wait and see, suggesting "a tailored solution triggered by a real undersubscription for long-term service…."[76] But, delaying action would not be consistent with setting the lowest possible rates consistent with sound business principles when BPA is confronting an objective threat to recovery of its Southern Intertie costs.[77] In *Golden NW Aluminum, Inc. v. Bonneville Power Admin.,* 501 F.3d 1037, 1052 (9th Cir. 2007), the court faulted BPA for basing rates on outdated assumptions. Here too, for BPA to continue assuming that customers will seek LTF service on the Southern Intertie at historical levels would be to make an assumption contradictory to the evidence presented. BPA Staff agree that such a determination would be contrary to acting with sound business principles and using a "business-orientated philosophy."[78]

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[73] *Deen and Wellenius*, BP-18-E-JP01-02 at 6, 9 (stating that for the Southern Intertie to remain fully subscribed the renewal rate would need to be 100 percent on the DC Intertie and 92 percent on the AC Intertie).
[74] *Id*. at 6.
[75] *See Golden Nw. Aluminum, Inc. v. Bonneville Power Admin.*, 501 F.3d 1037, 1052 (9th Cir. 2007)(finding that BPA's unreasonable assumptions about its ability to recover fish and wildlife costs when faced with contradictory, unrebutted evidence were improper).
[76] *Holcomb et al*., BP-18-E-JP03-01 at 91.
[77] BPA must set rates to recover its costs, in accordance with sound business principles. 16 U.S.C. § 839e(a)(1). *See also* BP-16 ROD at 9 (stating that ignoring actual financial conditions in the year when rates are set is not a sound business practice).
[78] *Pub. Power Council v. Bonneville Power Admin.*, 442 F.3d 1204 (9th Cir. 2006); *Pac. Nw. Generating Co-op. v. Bonneville Power Admin.*, 596 F.3d 1065, 1074 (9th Cir. 2010) (holding that voluntarily providing a $32 monetary benefit to certain customers would not be in accordance with the agency acting in a manner "consistent with sound

C. Staff's Proposal Is Not a Deviation from Cost-Based Ratemaking

BPA Staff's proposal includes a simple change to the formula used to set the hourly rate on the Southern Intertie: it replaces the outdated assumption of 80 traditional heavy load hours with 25 hours, a number determined by BPA Staff's analysis of the evolving demand patterns in California.[79] BPA Staff's proposal does not contemplate setting the number of heavy load hours based on a forecast of usage or hourly reservations, again contrary to assertions by JP03.[80]

The substitution of 25 hours for 80 hours in the hourly rate calculation does not represent a shift from the long-established cost-based ratemaking used by BPA, as JP03 claims.[81] To clarify, BPA Staff and stakeholders presented concerns and analysis about the erosion of value of LTF service as a motivation for re-examining the Southern Intertie hourly rates. The *motivation* for addressing the hourly rate is separate and apart from the rate methodology used to set the rate, which has remained constant and unchanged from the BP-16 rate period and prior rate periods.[82] Indeed, for JP03 to attack the Southern Intertie rate calculation with the 25 heavy load hour divisor is to attack that same calculation using the 80 hour divisor. But, JP03 has provided no evidence that the rate formula itself—which is the same general formula used by JP03's members—falls short of allocating costs on an equitable basis to the hourly users of the Southern Intertie or that by changing the divisor BPA has divorced the calculation from the underlying costs of the Southern Intertie.[83]

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business principles."). *Linn et al.,* BP-18-E-BPA-25 at 10 ("We do not believe that waiting until cost recovery issues materialize is the most prudent course of action.").

[79] The formula: $\frac{\frac{\$14.98}{\text{kW}}\text{ (annual cost allocation)}}{\text{(8,760 hrs (average \# of hours in FY18,19))}}\left(\frac{168}{\mathbf{25}}\right) = 11.49\,\frac{\text{mills}}{\text{kW}}$

The 25 hours (in emphasis) replaces the previously used value of 80 hours.

[80] *Linn et al*., BP-18-E-BPA-25 at 15-16; *Deen and Wellenius*, BP-18-E-JP01-02 at 11-13.

[81] *Holcomb et al*., BP-18-E-JP03-01 at 33-45.

[82] *Deen and Wellenius*, BP-18-E-JP01-02 at 11-13.

[83] *Linn et al*., BP-18-E-BPA-25 at 37.

D. BPA Staff's Proposal Is Conservative

Besides changes in the queue for new LTF service, the current trends in California generation suggest that the net load shape will continue to change. The reduction in net load during the mid-days hours in California has moved further and faster than expected, and as the mid-day depression in net load becomes deeper and affects more hours, the number of hours in which there is high demand for energy imports into CAISO will continue to decline.[84] The changing shape of the CAISO net load, commonly referred to as the "duck curve," is largely driven by additions of utility-scale and behind-the-meter solar generation in California. Utility-scale solar generation is approximately 9,000 MW at present, but it is expected to increase by another 4,000 – 5,000 MW by 2020.[85] Behind-the-meter solar generation also is expected to increase by approximately 4,000 MW by 2020.[86] The addition of this solar generation likely means that BPA Staff's finding that there are currently 25 high-value hours per week may prove to overstate the actual number of high-value hours in the future. Not only do these forecasts show that BPA Staff's proposal is conservative, but they also indicate the Administrator should act now to address circumstances affecting the desirability of LTF service on the Southern Intertie.[87]

E. Certain Uses of the LTF Capacity on the Southern Intertie Do Not Obviate the Need to Change the Hourly Rate

JP03 has claimed that certain potential uses of firm transmission service on the Southern Intertie demonstrate that customers continue to have an incentive to purchase LTF service.[88] JP03

[84] *Deen and Wellenius*, BP-18-E-JP01-01 at 21.
[85] *Id*.
[86] *Id*. at 21-22.
[87] BPA Staff's proposal also made a simplifying and conservative assumption that the 25 high-value hours occur each and every week of the year. However, the patterns of hourly transmission reservations can vary substantially between weeks, given that market conditions are highly variable throughout the year; thus in a less conservative approach BPA Staff's proposal could have addressed the weekly variability as well. *Deen and Wellenius*, BP-18-E-JP01-01 at 22-23.
[88] *Holcomb et al.*, BP-18-E-JP03-01 at 46-47.

points to the need for LTF service in order to obtain dynamic scheduling capabilities, arguing this functionality is valuable and necessary for delivery of certain categories of renewable resources under California's Renewable Portfolio Standards ("RPS"). JP03 also alludes to the role of LTF service in connection with the evolving Energy Imbalance Market ("EIM") as well as for sales of certain Ancillary Services to CAISO. But JP03 fails to disclose, much less address, the fact that the quantity of LTF service used in this manner is extremely limited. For instance, the DC Intertie does not currently support dynamic scheduling, or even 15-minute schedules. And as the record reflects, BPA's share of the dynamic transfer capability on the AC Intertie is only approximately 225 MW,[89] representing less than 5 percent of BPA's total north-to-south Southern Intertie capacity. Thus even assuming such uses confer ongoing value, JP03's argument simply does not apply to the vast majority of BPA's Southern Intertie capacity, and hence does not mitigate the concerns set out by BPA Staff regarding BPA's ability to recover the costs of the Southern Intertie segment through continued high levels of sales of LTF service.

F. BPA Staff and JP01 Rebutted Potential Impacts Identified by JP03

BPA Staff's proposal is simple in both theory and execution and offers a targeted solution to a specific problem. JP03 broadly asserts that implementation of Staff's proposal will cause an increase in costs to California entities, the potential collapse of the energy markets at COB and NOB with a corresponding drop in energy prices at Mid-C. JP03 also asserts that the magnitude of the price increase at COB and NOB will be approximately \$8/MWh, roughly the difference between the BP-16 hourly rate and the proposed hourly rate for the BP-18 rate period.[90] These concerns were addressed and rebutted by BPA Staff and JP01, as reviewed below. Regardless, BPA must be first and foremost concerned with meeting its statutory requirements, such as setting

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[89] *Linn et al.*, BP-18-E-BPA-25 at 11.
[90] *Holcomb et al.*, BP-18-E-JP03-01 at 62.

rates to recover its costs, and not with reviewing allegations of impacts to California entities that may or may not occur as a result of setting appropriate cost-based rates.[91]

First, BPA Staff's analysis of the alleged $8/MWh increase in power prices shows that such predictions are unrealistic. Buyers in California have other options to procure energy, as JP03 acknowledges, requiring a seller using Southern Intertie capacity to offer delivered energy at competitive market prices.[92] In addition, BPA Staff's analysis showed JP03's theory to be inconsistent with observed power pricing. The difference in pricing between Mid-C (the major trading hub in the Northwest) and COB did not track BPA's rate for hourly service between those two points, as JP03's theory would suggest.[93] Instead, Staff found that the pricing differential between COB and Mid-C is volatile and that the hourly rate does not necessarily correlate to the difference in price. Further, BPA Staff examined resale prices of LTF transmission service, finding that the resale value is less than the posted hourly rate, which means that LTF customers will not necessarily be able to increase their re-sale price by the proposed increase in the hourly rate.[94] In sum, JP03's predictions of dramatic price increases at COB are unrealistic and without support.[95]

Second, JP03's concerns about evaporating liquidity at COB and NOB are misplaced.[96] Transactions actually scheduled using original hourly transmission service represent approximately 2 percent of the energy delivered to California. The vast majority (roughly 98 percent) of energy delivered to California is done so using Southern Intertie transmission services

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[91] 16 U.S.C. § 839e(a)(1).
[92] *Linn et al*., BP-18-E-BPA-25 at 26-28.
[93] *Id*. at 28.
[94] *Id*. at 28-29.
[95] BPA Staff also states that JP03's claims of higher prices at COB and NOB are not supported by analysis but are simply based on personal experience. *See Linn et al*., BP-18-E-BPA-25 at 27, 31.
[96] *Holcomb et al.*, BP-18-E-JP03-02-CC01 at 22.

other than original hourly service.[97] Thus, to the extent that the increased hourly rate diminishes energy transactions at COB and NOB that rely on hourly service, this impact will be minimal. Conversely, fully subscribed LTF service minimizes transactions costs or "hurdle rates," which in turn incentivizes the LTF customer either to utilize or to resell unneeded capacity to other users. It is full subscription of the Southern Intertie under LTF service—and not the rate for hourly service—that supports liquidity at COB and NOB.[98]

Likewise, the potential impact to SMUD is over-stated and unsupported. SMUD alleges (as a member of JP03) potential impacts of $1.3 million to $4.4 million annually.[99] But, JP03's analysis includes assumptions that are unrealistic and without basis, such as the $8/MWh increase in energy prices at COB and NOB discussed above. Further, JP03 does not even know how much, if any, of SMUD's 2016 hourly energy purchases were delivered using BPA's hourly transmission service, thus JP03 cannot claim that any—let alone all—of its energy purchases will incur the higher hourly rate.[100] Similarly, JP03 witnesses aver that staff from Energy and Environmental Economics ("E3") provided certain numbers, but by JP03's own explanation, these numbers are based on the erroneous assumptions (dictated by JP03's experts) that all of SMUD's energy purchasers would be $8/MWh more expensive and that hourly markets at COB would either suffer reduced liquidity or collapse altogether. These core assertions have been fully rebutted by BPA Staff and JP01 testimony. The E3 numbers—based on faulty assumptions—can produce only faulty conclusions and should be afforded no weight.

Even if SMUD's purchase costs at COB were to increase, this impact must be put in the context of the impact to BPA's customers from reduced sales of LTF service, and the attendant

[97] *Linn et al.*, BP-18-E-BPA-25 at 29-30.
[98] *Id*. at 30.
[99] *Holcomb et al.*, BP-18-E-JP03-01 at 12-13; *Holcomb et al.*, BP-18-E-JP03-02-CC01 at 25.
[100] *Deen and Wellenius*, BP-18-E-JP01-02 at 15-16.

risk of failure to recover the costs of the Southern Intertie segment. Just 100 MW of unsubscribed capacity (on facilities with 5,715 MW of North-to-South capacity) would result in BPA losing LTF sales revenues of approximately $1.5 million per year (i.e., an amount comparable to SMUD's alleged impact).[101] And, with a limited queue for new LTF service and 2,801 megawatts up for renewal during the BP-18 rate period, BPA's risk of under-subscription of LTF service and attendant revenue deficit is clearly very significant.

Finally, in the unlikely event that adverse unintended consequences arise, in the near-term BPA retains the ability to discount the hourly rate at its discretion. In the longer-term, BPA sets rates every two years and could re-evaluate the hourly rate in the BP-20 rate proceeding, if necessary.

## V. BPA STAFF'S PROPOSAL DIFFERS FROM THE PROPOSAL ADDRESSED IN THE BP-16 RATE CASE

JP03 argues that because the Administrator rejected a proposal in the BP-16 rate proceeding to change BPA's hourly rate on the Southern Intertie, he should do so again here. But, BPA Staff's rate proposal in this proceeding differs materially from the customers' BP-16 proposal. Specifically, BPA Staff's current proposal is based on a well-documented, uncontroverted change in the high-value hours in California, and not on historical usage of hourly service on the Southern Intertie, as in the BP-16 rate proceeding. As explained above, the peak demand hours on the Southern Intertie now total only 5 hours per day, and BPA Staff's proposed hourly rate "is simply acknowledging the reality of a five-hour-per-day-peak in California."[102] It

[101] If the entirety of the 2,801 MW up for renewal during the BP-18 rate period is not renewed, BPA would forgo over $40 million in revenues (derived by multiplying the base rate of $14,760 per MW-year by 2,801 MW). *See Linn et al.*, BP-18-E-BPA-25 at 15.
[102] *Id.* at 16.

is immaterial that the Administrator rejected a different Southern Intertie rate proposal advanced under different circumstances in BP-16.

In addition, BPA Staff's proposal will not result in the "vicious cycle" of increasing hourly rates if the volume of hourly sales declines. BPA Staff's proposal revises the 80 traditional heavy load hours to the 25 high-value hours based on the changes in California's net load shape; BPA Staff's proposal does not rely on usage patterns or on anticipating the numbers of hours the average customer will use hourly service in a given week, as proposed in the BP-16 rate proceeding.[103] Thus, the concern about the hourly rate spiraling upward is misplaced.

JP03 also argues that there has been no material change in the agency's risk of under-recovery of Southern Intertie embedded costs since the BP-16 rate proceeding. When assessing the risk of under-recovery for the BP-16 rate period, BPA Staff and the Administrator relied on the depth of BPA's Southern Intertie queue relative to the MW up for renewal.[104] The changes in the size of BPA's queue were discussed in great detail above. In contrast to BP-16, in the BP-18 rate period, the agency is confronted with 2,801 MW of LTF service (representing over $40 million in annual revenues) that are up for renewal, a queue that is significantly smaller than that, and a growing number of queue customers who have rejected LTF service offered in the last year.[105] "All of this demonstrates the additional risk of underrecovery in BP-18 as compared to BP-16,"[106] a risk that the Administrator should not ignore.

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[103] *Id*. at 15-16; *Deen and Wellenius*, BP-18-E-JP01-02 at 20-21.
[104] *Linn et al.*, BP-18-E-BPA-25 at 14; BP-16 ROD at 111.
[105] *Linn et al.*, BP-18-E-BPA-25 at 14-15; infra, fn. 101; BP-18-E-JP01-03 at 2 (Response to Data Request PP-BPA-26-62).
[106] *Linn et al.*, BP-18-E-BPA-25 at 15.

## VI. THE ADMINISTRATOR SHOULD UPHOLD THE HEARING OFFICER'S DENIAL OF JP03'S MOTION TO COMPEL

On March 24, 2017, the Administrator issued an order on JP03's petition for interlocutory appeal of the Hearing Officer's denial of JP03's motion to compel.[107] In that order, the Administrator stated that parties may address the issues in their Initial Briefs. As discussed in detail in JP01's answer to JP03's petition for interlocutory appeal and briefly reviewed here, the Administrator should deny the petition and uphold the Hearing Officer's order.

JP01 provided direct testimony supporting BPA Staff's proposal to revise the Southern Intertie hourly rate. JP01's direct testimony provided an analysis of publicly available information and concluded that (1) BPA should take prompt action in this rate case as an analysis of BPA's queue for LTF service on the Southern Intertie showed weakness in the demand for such service, which could result in possible under-recovery; (2) BPA Staff's proposed hourly rate will provide a strong incentive for BPA transmission customers to continue to choose LTF service over hourly service; (3) BPA Staff's proposal is consistent with BPA's long-standing rate design and rate methodologies; and (4) BPA Staff's proposal does not raise concerns about unintended consequences.[108]

On the basis of JP01's testimony, JP03 sought to compel Powerex to provide a broad array of highly-sensitive commercial documents, including profitability analyses, internal documents and communications, and related documents concerning Powerex's commercial decision-making.[109] The JP01 witnesses did not open the door to JP03's invasive data requests as the JP01

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[107] BP-18-A-01.

[108] *Deen and Wellenius*, BP-18-E-JP01-01 at 1-2; BP-18-M-JP01-03 at 1-3; BP-18-M-JP01-01. For additional context and arguments, please refer to BP-18-M-JP01-01, BP-18-M-JP01-02, and BP-18-M-JP01-03.

[109] BP-18-M-JP01-03 at 1-3. To clarify, the JP01 witnesses did make representations about the identities of Powerex and PPC, but these basic and preliminary statements (e.g., "Powerex markets power exported from the

direct testimony did not make representations about members of JP01 but analyzed only publicly available information. Thus, demands for Powerex's highly-sensitive commercial documents are outside the scope of JP01's testimony and permissible discovery. JP01 also objected to (1) providing publicly available information to which JP03 itself had access; (2) performing analyses of publicly available information that JP03 also could perform itself; (3) answering hypothetical and conjectural questions;[110] (4) providing confidential, commercially-sensitive documents to a potential counter-party;[111] and (5) providing privileged documents and communications.[112] The Hearing Officer correctly upheld JP01's objections.

JP03 has had a full opportunity to participate and present evidence in this rate proceeding, as evidenced by its voluminous direct and rebuttal testimonies, hundreds of data requests, and cross examination of the BPA and JP01 witnesses. The Administrator should uphold the Hearing Officer's denial of JP03's motion to compel.

## VII. CONCLUSION: THE ADMINISTRATOR SHOULD ADOPT BPA STAFF'S PROPOSAL

BPA Staff and JP01 have presented clear, convincing and substantial evidence that the value of LTF transmission service on the Southern Intertie has eroded, that the erosion of value is reducing demand for LTF service, and that reduced demand for LTF service could jeopardize BPA's ability to recover the Southern Intertie segment costs. Moreover, BPA Staff and JP01 have demonstrated that updating the rate formula with the proper number of high-value hours is an

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surplus capability of the predominantly hydropower generation facilities of its parent British Columbia Hydro and Power Authority (BC Hydro).") did not pertain to the Southern Intertie.

[110] The Hearing Officer stated in responses to a JP03 data request that posed a question about future renewal decisions, "[a] party may not create testimony of another party for the purposes of seeking information not raised by the requested party's testimony itself." BP-18-HOO-21 at 11.

[111] The potential sanctions, such as striking JP03 documents in this rate case, that could be imposed on JP03 by the Hearing Officer for disclosing highly-sensitive Powerex documents pale in comparison to the long-term competitive harm that Powerex might suffer from such disclosure.

[112] BP-18-M-JP01-01 at 12-41.

effective remedy to incentivize customers to continue to invest in LTF service, ensuring BPA continues to recover the cost of the Southern Intertie segment through its rates and without significant adverse or unintended consequences. This rate proposal is supported by not just BPA Staff, but also by a broad coalition of BPA's customers, with the only opposition coming from a group of three California-based entities that seek to preserve the inequitable transfer of benefits that arise from the status quo. The proposed change to the Southern Intertie hourly rate is within the Administrator's authority and discretion to implement, and JP01 urges the Administrator to act now.

Respectfully submitted,

*/s/ Irene A. Scruggs*

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May 2, 2017

## LIST OF JOINT PARTY 1 EXHIBITS

| Exhibit No. | Exhibit Name | Date Filed | Status |
|---|---|---|---|
| BP-18-E-JP01-01 | Direct Testimony of Joint Party 01 | January 31, 2017 | Admitted |
| BP-18-E-JP01-02 | Rebuttal Testimony of Joint Party 01 | March 14, 2017 | Admitted |
| BP-18-Q-PP-03 | Qualification Statement of Michael Deen | January 23, 2017 | Admitted |
| BP-18-Q-PX-02 | Qualification Statement of P. Kevin Wellenius | January 31, 2017 | Admitted |
| BP-18-E-JP01-03 | Data Requests and Responses Admitted into the Record | April 24, 2017 | Admitted |

## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document on Bonneville Power Administration's Office of General Counsel, the Hearing Clerk, and all litigants in this proceeding by uploading the document on the 2018 Joint Power and Transmission Rate Adjustment Proceeding (BP-18) secure website, pursuant to BP-18-HOO-02 and BP-18-HOO-05.

Dated this 2nd day of May, 2017 at Seattle, Washington.

*/s/ Tyler S. Johnson*

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