

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

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

DIRECT TESTIMONY OF:

Public Power Council
Powerex Corp.

as

JOINT PARTY 1

SUBJECT:

BPA SOUTHERN INTERTIE HOURLY RATE

WITNESSES:

Michael Deen
Kevin Wellenius

January 31, 2017

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1 **SUBJECT: TESTIMONY OF JOINT PARTY 1 REGARDING BPA’s**
2 **SOUTHERN INTERTIE HOURLY RATE**

3 **SECTION 1: INTRODUCTION AND PURPOSE OF TESTIMONY**

4 *Q: Please state your names and qualifications.*

5 A: My name is Michael Deen. My qualifications are shown at BP-18-Q-PP-03.

6 My name is Kevin Wellenius. My qualifications are shown at BP-18-Q-PX-02.

7 *Q: What is the purpose of your testimony?*

8 A: The purpose of this testimony is to express the strong support of Joint Party 1
9 (JP01) for the rate that Bonneville Power Administration’s (BPA’s) staff has
10 proposed in this proceeding for BPA’s hourly transmission service on the
11 Southern Intertie.

12 *Q: Please briefly summarize your principal conclusions regarding these rates.*

13 A: JP01 supports BPA staff’s proposed rate for hourly transmission service on the
14 Southern Intertie for several reasons:

15 *First*, BPA transmission customers have consistently expressed their
16 concern that the value of—and the incentives to purchase—long-term firm service
17 on the Southern Intertie has been declining as a result of changes in the California
18 energy markets. The Administrator committed in the BP-16 Record of Decision
19 (ROD) to fully examine these concerns and to take appropriate steps to address
20 them, including a potential change to the hourly rate. There continues to be
21 growing evidence of declining customer demand for long-term firm service on the
22 Southern Intertie: the queue for new service has declined sharply, customers have
23 declined to renew expiring service, and customers have rejected offers of long-
24 term service when it was offered by BPA. Several thousand megawatts of long-

1 term firm service on the Southern Intertie will either expire or face renewal during
2 the BP-18 rate period, making prompt and effective action necessary to ensure
3 BPA continues to recover the Southern Intertie revenue requirement in a
4 predictable and stable manner.

5 *Second*, JP01 believes that BPA staff's proposed hourly rate will provide a
6 strong incentive for BPA transmission customers to continue to choose to reserve
7 long-term service, rather than rely on hourly service, for deliveries to California
8 over the Southern Intertie.

9 *Third*, JP01 believes that BPA staff's proposed rate is fully consistent
10 with, and not a departure from, BPA's long-standing rate design and rate
11 methodology. Moreover, staff's proposed rate is conservative, and consistent
12 with other cost-based benchmarks for service on the Southern Intertie.

13 *Fourth*, BPA staff's proposed rate does not raise concerns of unintended
14 consequences.

15 *Q: What is JP01's interest in these rates and charges?*

16 *A:* JP01 is a coalition of rate case parties with a joint interest in ensuring that BPA
17 appropriately recovers the embedded costs of the Southern Intertie transmission
18 facilities from users of those facilities.

19 Public Power Council's (PPC) members are preference customers of BPA,
20 all of which purchase network transmission service for delivery of power to their
21 loads and, in many cases, for delivery of their surplus energy to purchasers.
22 Many PPC members purchase intertie transmission services from BPA; all of
23 these transmission services purchases are made subject to the applicable rates,

1 terms and conditions in BPA’s rate schedules. Some of PPC’s members are
2 owners of Southern Intertie capacity. Many of PPC’s members also purchase
3 energy and power products from non-federal generators located both inside and
4 outside BPA’s Balancing Authority Area (BAA) and more are expected to do so
5 in the future, including during the FY 2018-2019 rate period.

6 Powerex Corp. (Powerex) markets power exported from the surplus
7 capability of the predominantly hydropower generation facilities of its parent the
8 British Columbia Hydro and Power Authority (BC Hydro). Powerex also markets
9 power from its own portfolio of third-party power purchases. Powerex sells and
10 purchases power throughout the Western Interconnection, including to the
11 California Independent System Operator, Corp. (CAISO) organized markets and
12 to bilateral customers in California. Powerex is one of BPA’s largest non-
13 affiliated transmission customers, and has contracted for substantial Long-Term
14 Firm transmission capacity on the Southern Intertie.

15 *Q: How is your testimony organized?*

16 *A:* Section 2 explains why JP01 believes decisive action is necessary to ensure the
17 Southern Intertie revenue requirements continue to be recovered from sales of
18 long-term transmission service. Section 3 discusses how BPA staff’s proposed
19 hourly rate will help restore incentives for transmission customers to continue to
20 invest in long-term service on the Southern Intertie. Section 4 sets forth the
21 reasons JP01 believes BPA staff’s proposed rate is reasonable. Section 5
22 demonstrates that BPA staff’s proposed hourly rate does not raise concerns
23 regarding potential unintended consequences.

1 **SECTION 2: BPA MUST ACT NOW TO ENSURE SOUTHERN INTERTIE**
2 **REVENUE REQUIREMENTS CONTINUE TO BE RECOVERED**
3 **FROM SALES OF LONG-TERM FIRM TRANSMISSION**
4 **SERVICE**

5 *Q: What is the primary concern that BPA staff attempts to address with their*
6 *proposed hourly rate on the Southern Intertie?*

7 A: The primary concern that BPA staff's proposed hourly rate seeks to address is the
8 evidence of declining demand for long-term firm service on the Southern Intertie.
9 BPA transmission customers have expressed their view that the value of investing
10 in long-term firm service on the Southern Intertie has been eroded over the past
11 several years. In the BP-16 ROD, the Administrator committed to further
12 examine the issue and identify possible rate and/or non-rate measures. Since that
13 time, the evidence of reduced customer demand for long-term firm service on the
14 Southern Intertie has continued to grow. In order for BPA to ensure it continues
15 to recover fully the revenue requirement of the Southern Intertie from customers
16 taking service over those facilities, and in a stable and predictable manner, it is
17 imperative for BPA to take decisive action to strengthen the incentives for
18 customers to continue to choose to invest in long-term firm service on the
19 Southern Intertie.

20 **A. BPA TRANSMISSION CUSTOMERS HAVE EXPRESSED**
21 **PERSISTENT CONCERN OVER DECLINING VALUE OF**
22 **LONG-TERM FIRM SERVICE ON THE SOUTHERN**
23 **INTERTIE**

24 *Q: Please describe the concern regarding the declining value of long-term firm*
25 *service on the Southern Intertie.*

26 A: BPA's sales of Non-Firm, in addition to Firm, transmission service on the
27 Southern Intertie lead to frequent congestion—that is, many hours in which total

1 reserved transmission exceeds the physical capability of the facilities. This is
2 particularly acute in the north-to-south direction, which is the predominant
3 direction of power flows between the Pacific Northwest and California. Under
4 the Open Access Transmission Tariff (OATT) framework, this congestion should
5 be resolved according to priority of the transmission service: Firm reservations
6 flow ahead of Non-Firm reservations. Uniquely on the Southern Intertie,
7 however, the congestion is largely resolved by the CAISO—which grants awards
8 for deliveries in its markets without regard to the seller’s transmission priority on
9 BPA’s system—and not according to the OATT framework. As a result, BPA
10 transmission customers reserving Non-Firm transmission can flow on BPA’s
11 Southern Intertie facilities ahead of customers that have invested in Firm service.
12 The cause of this issue is the “seams” between the transmission frameworks of
13 BPA’s OATT and the CAISO’s market rules.

14 Because priority of transmission service on BPA’s system is generally
15 immaterial for transactions with the CAISO, it stands to reason that transmission
16 customers will seek to use the Southern Intertie transmission product that is
17 available from BPA at the lowest total cost. Under current practice this allows
18 sellers to use hourly non-firm (HNF) transmission service to “cherry pick”
19 high-value hours at significantly lower total cost than is paid by long-term firm
20 (LTF) customers.

21 This situation can lead to a decline in the value of service held by LTF
22 customers by either inhibiting a LTF customer from fully utilizing its
23 transmission rights or by undermining the value of sales into the Southern Intertie

1 points of delivery. The erosion of value of LTF service may, in turn, reduce BPA
2 transmission customers' willingness to invest in the LTF transmission product.

3 **B. THE ADMINISTRATOR'S DECISION IN BP-16**
4 **COMMITTED TO EXPLORING STEPS TO ENSURE**
5 **CONTINUED SALES OF LONG-TERM FIRM SERVICE**
6 **ON THE SOUTHERN INTERTIE**

7 *Q: Was the rate for hourly transmission service on the Southern Intertie an issue in*
8 *BPA's BP-16 rate proceeding?*

9 A: Yes. PPC and Powerex raised the issue of the devaluation of long-term firm
10 service on the Southern Intertie (IS LTF) in both the BP-16 pre-rate case process
11 and in the proceeding itself as Joint Party 6. We also proposed a rate design
12 solution in that case. Although BPA did not adopt a rate design change at that
13 time, the Administrator made certain commitments regarding next steps.

14 *Q: What commitments did the Administrator make in the BP-16 ROD regarding this*
15 *issue?*

16 A: As part of the decision regarding Issue 4.3.3.2 in the BP-16 ROD, BPA
17 committed to hold workshops to further examine the issue of rate and non-rate
18 incentives for continued sale of IS LTF service.¹ Additionally, the Administrator
19 discussed this topic in the preface to his ROD, noting that "seams issues exist and
20 must be addressed" and committing to further investigate the issues and
21 implement a rate solution if it was found to be necessary.² The Administrator also

¹ BP-16 Rate Proceeding, Administrator's Final Record of Decision, BP-16-A-02 at 112 (July 2015).

² *Id.* at P-2.

1 voiced the determination to “preserve the value of our assets, for both BPA’s
2 financial stability and benefit of all of our customers and the region.”³

3 **C. CUSTOMER DEMAND FOR LONG-TERM FIRM**
4 **SERVICE ON THE SOUTHERN INTERTIE HAS**
5 **DECLINED SHARPLY**

6 *Q: BPA staff state that it “is no longer the case” that the Southern Intertie remains*
7 *fully subscribed in the southbound direction, or that BPA has a long queue of*
8 *customers.⁴ Do you agree?*

9 A: Yes. First and foremost, the AC Intertie is no longer fully subscribed on a long-
10 term basis. BPA staff have confirmed that capacity is currently available to any
11 eligible customer willing to commit to long-term service.⁵ Additionally, BPA
12 staff’s testimony notes that the queue of requests for new long-term service (*i.e.*,
13 requests for original service, as opposed to requests for renewal) declined from
14 6,228 MW in September 2014 to 1,002 MW.⁶ Since the time that BPA staff filed
15 their testimony, the volume of requests for new service in the queue has continued
16 to decline. As of the end of 2016, there remained 812 MW of requests for new
17 long-term service on the Southern Intertie.

18 *Q: Have BPA customers continued to withdraw new service requests from the long-*
19 *term queue since the filing of BPA’s testimony?*

³ *Id.*

⁴ Fredrickson *et al.*, BP-18-E-BPA-12, at 6, lines 18-24.

⁵ See BPA response to PP-BPA-26-27, reproduced in Attachment A.

⁶ Fredrickson *et al.*, BP-18-E-BPA-12, at 7, lines 20-21.

1 A: Yes. In December, Portland General Electric withdrew its only remaining request
2 for original service on the Southern Intertie, which was from Big Eddy to NOB
3 and totaled 100 MW.

4 Q: *BPA staff also testified that customers had rejected offers of long-term service,*
5 *resulting in 690 MW being removed from the queue.⁷ Have customers continued*
6 *to decline long-term service on the Southern Intertie since the filing of BPA staff's*
7 *testimony?*

8 A: Yes, they have. For instance, in December Cargill declined a long-term
9 transmission service agreement on the AC Intertie when it was offered. Its 50
10 MW request was therefore removed from the queue. Cargill also has another 50
11 MW request for long-term service on the AC Intertie, which is now next in line to
12 be offered service. If Cargill declines service on this request, the queue would be
13 reduced by a further 50 MW. This would reduce the queue for original long-term
14 service on the AC Intertie to a single request, from Avangrid, which also declined
15 service the last time it was offered.⁸

16 Q: *Is the queue for long-term service on the DC Intertie also of limited depth?*

17 A: Yes. While there is a greater quantity of original long-term service requests on
18 the DC Intertie, these requests all have a termination date of January 1, 2019 or

⁷ Fredrickson *et al.*, BP-18-E-BPA-12, at 8, lines 1-6.

⁸ See BPA response to PP-BPA-26-29 at (c), reproduced in Attachment A.

1 earlier.⁹ All of these original service requests will be removed from the queue
2 prior to the end of the BP-18 rate period.

3 *Q: BPA staff's testimony states that 2,344 MW of current long-term firm service*
4 *agreements will terminate during the FY 2018-2019 rate period unless customers*
5 *decide to renew service.¹⁰ Does this fully represent the renewal decisions that*
6 *will need to be made during the BP-18 rate period?*

7 A: No, the exposure is significantly greater. BPA staff's testimony identifies that
8 2,344 MW of current long-term firm service will terminate prior to the end of
9 September 2019. However, in order to renew an existing long-term reservation, a
10 transmission customer must notify BPA at least one year prior to the date of
11 termination. Therefore, the quantity of long-term transmission reservations that
12 either expire or will face renewal during the FY 2018-2019 rate period is
13 considerably larger—3,158 MW—and represents more than half of all of BPA's
14 Southern Intertie long-term sales volume.¹¹

15 *Q: What do you conclude from these observations?*

16 A: Two conclusions immediately stand out. First, that BPA can no longer be
17 confident that customers will continue to commit to long-term service on the
18 Southern Intertie. Large numbers of new long-term service requests have been

⁹ See BPA response to PP-BPA-26-30 at (c), reproduced in Attachment A.

¹⁰ Fredrickson *et al.*, BP-18-E-BPA-12-E01, at 8, lines 9-10.

¹¹ The quantity of reservations facing renewal on the AC Intertie is 1,416 MW (See BPA response to PP-BPA-26-28, reproduced in Attachment A) and on the DC Intertie is 1,742 MW (See BPA response to PP-BPA-26-31, reproduced in Attachment A). BPA's projected long-term sales on the Southern Intertie total 6,042 MW. See BP-18-E-BPA-08 at Tbl. 4 row 66.

1 withdrawn from the queue, and multiple customers have declined long-term
2 service when it was offered. BPA staff are correct to be concerned and to argue
3 that the Administrator should take action to encourage transmission customers to
4 continue to choose long-term firm transmission service on the Southern Intertie.
5 Second, a very large quantity of existing long-term transmission reservations will
6 expire or face renewal during the BP-18 rate period. This rate case is the last
7 regular opportunity for BPA to implement changes to its rates in time to inform
8 the decisions that its transmission customers will be making regarding those
9 reservations. There is no time left to “wait and see.”

10 **D. REDUCED DEMAND FOR LONG-TERM FIRM SERVICE**
11 **ON THE SOUTHERN INTERTIE JEOPARDIZES THE**
12 **STABLE RECOVERY OF COSTS AND IS NOT IN THE**
13 **BEST INTEREST OF BPA OR ITS CUSTOMERS**

14 *Q: Please explain how reduced demand for long-term firm service on the Southern*
15 *Intertie jeopardizes the stable recovery of costs.*

16 *A: BPA recovers the vast majority of the embedded costs of the Southern Intertie*
17 *facilities from the sale of long-term firm transmission service. Customers*
18 *reserving this service pay for it in every hour of the year, whether they actually*
19 *schedule energy or not. Moreover, customers reserving Long-Term Firm service*
20 *often commit to multiple years of this service, in some cases for as long as 20*
21 *years. So in addition to recovering the majority of its Southern Intertie costs from*
22 *the sale of Long-Term Firm service in each year, BPA derives significant revenue*
23 *certainty that it will continue to be able to do so for several years into the future.*
24 *The continued sale of Long-Term Firm service on the Southern Intertie is*

1 therefore vital to BPA’s ability to ensure that it continues to be able to fully
2 recover the cost of the Southern Intertie facilities.

3 *Q: What could happen if BPA were not able to recover the embedded cost of the*
4 *Southern Intertie facilities through the continued sale of long-term firm service?*

5 A: If subscriptions to Long-Term Firm service on the Southern Intertie declined,
6 there would be several ramifications. First and foremost, the recovery of
7 embedded costs would be less certain as a higher fraction of the revenue
8 requirement would need to be recovered from short-term sales that may or may
9 not materialize. This increased uncertainty will place increased stress on BPA’s
10 financial reserves from year to year.

11 Second, Long-Term Firm customers pay for transmission service
12 regardless of whether or not they actually deliver energy in any given hour. This
13 means that customers with Long-Term Firm reservations have “sunk”
14 transmission costs and have a financial incentive to fully utilize the Southern
15 Intertie facilities whenever an economic opportunity presents itself. If Long-
16 Term Firm reservations expire and transmission customers are less willing to
17 commit to additional Long-Term Firm service, however, then use of the Southern
18 Intertie will increasingly require purchasing short-term transmission service.
19 Under such circumstances, transmission costs would no longer be “sunk,” and
20 there may be a significant number of hours in which variable transmission costs
21 prevent otherwise economic use of the Southern Intertie facilities. In other words,
22 Southern Intertie utilization may decline if a larger portion of the Southern Intertie
23 costs had to be recovered from sales of short-term service. This would undermine

1 the functioning of economically efficient wholesale power markets, to the
2 detriment of all participants and ultimately consumers.

3 Third, the loss of Long-Term Firm sales may simply make it impossible to
4 recover the embedded costs of the Southern Intertie from users of those facilities.
5 While financial reserves may absorb revenue variations from year to year, a
6 chronic inability to recover the revenue requirement from Southern Intertie users
7 will inevitably shift some of the costs of those facilities to BPA's other
8 transmission customers. This would be undesirable and contrary to the
9 cost-causation principle of ratemaking, given that power flows on the Southern
10 Intertie are predominantly from North to South (exports) rather than being used to
11 serve native load in the Northwest.

12 **SECTION 3: BPA STAFF'S SOUTHERN INTERTIE HOURLY RATE**
13 **PROPOSAL ADDRESSES THE CONCERNS OVER FUTURE**
14 **SALES OF LONG-TERM FIRM SERVICE**

15 **A. DESCRIPTION AND BASIS OF BPA STAFF'S HOURLY**
16 **RATE PROPOSAL**

17 *Q: What rate are BPA staff proposing for hourly service on the Southern Intertie?*

18 A: BPA staff are proposing an hourly rate of 11.49 mills per kWh on the Southern
19 Intertie.

20 *Q: What is your understanding of how BPA staff calculated the proposed hourly*
21 *rate?*

22 A: BPA staff maintained the same fundamental rate design and rate methodology
23 BPA has used in prior rate cases. That is, BPA sets rates for hourly service so
24 that customers reserving hourly service for a specified number of hours per week,
25 for each week of the year, will face the same cost as a customer reserving long-

1 term firm service. Staff’s calculation in the BP-16 rate case used a value of 80
2 hours per week—corresponding to 16 hours per day, 5 days per week. Staff’s
3 proposed BP-18 hourly rate is based on a value of 25 hours per week. Beyond the
4 use of a different number of hours of service, the calculation of the proposed rate
5 follows the same formula as in prior years.

6 *Q: Do BPA staff explain why they calculated the proposed hourly rate based on 25*
7 *hours per week rather than 80 hours per week?*

8 A: Yes. BPA staff explained that 25 hours per week better reflects the evolving
9 trends in the California organized markets, operated by the CAISO. In particular,
10 BPA staff explained that the dramatic increase in California renewable
11 generation, especially solar, “has reduced the demand for imports during the
12 afternoon, a portion of the day that has traditionally been included in the
13 definition of heavy load hours.”¹² According to BPA staff, these changing
14 conditions, together with the fact that the CAISO markets operate on an hourly
15 and sub-hourly basis, “have effectively decreased the number of heavy load hours
16 in California to 25 hours per week.”¹³

17 **B. BPA STAFF’S RATE PROPOSAL WILL RESTORE**
18 **INCENTIVES FOR CUSTOMERS TO INVEST IN LONG-**
19 **TERM FIRM SERVICE ON THE SOUTHERN INTERTIE**

20 *Q: How will BPA staff’s proposed hourly rate encourage transmission customers to*
21 *continue to invest in long-term service on the Southern Intertie?*

¹² Fredrickson *et al.*, BP-18-E-BPA-12, at 5, lines 3-5.

¹³ *Id.* at 10, lines 7-8.

1 A: In principle, there are three broad reasons for a transmission customer to choose
2 to reserve long-term firm service instead of relying on hourly non-firm service.
3 First, reserving long-term firm service secures transmission service, which may or
4 may not be available on an hourly basis. Second, reserving long-term firm
5 service provides higher scheduling priority than hourly non-firm service. Third,
6 depending on how many hours per year the customer anticipates scheduling on
7 the transmission reservation, long-term firm service may have a lower total cost
8 than hourly service.

9 In the case of the Southern Intertie, however, all three of these reasons for
10 purchasing long-term service have been eroded. BPA staff's proposed hourly
11 rate, however, is designed to restore the third reason above. That is, BPA staff's
12 proposed hourly rate reduces the financial incentive to rely on hourly transmission
13 service rather than long-term service.

14 Q: *Please explain how the first reason for purchasing long-term firm service has*
15 *been eroded on the Southern Intertie?*

16 A: Firm transmission capacity on the Southern Intertie that has been reserved but not
17 scheduled is re-sold by BPA as non-firm service beginning at approximately 10
18 p.m. of the day prior to delivery. If CAISO has awarded a sale to a customer
19 without firm transmission, however, under "normal" conditions this means that a
20 customer with firm transmission will be unable to submit a schedule by the non-
21 firm release timeline. As BPA staff's testimony explains, a "seller bidding into
22 the CAISO market without firm transmission can anticipate that non-firm
23 transmission inventory will become available on the northern half of the intertie if

1 its bid is selected in the CAISO market.”¹⁴ Therefore, a transmission customer
2 does not need to invest in long-term firm service on the Southern Intertie in order
3 to reliably make sales into the CAISO markets; it can generally rely on hourly
4 non-firm service being made available by BPA whenever the customer receives a
5 CAISO market award.

6 *Q: Please explain how the second reason for purchasing long-term firm service has*
7 *been eroded on the Southern Intertie?*

8 A: The scheduling priority of long-term firm service is largely irrelevant for making
9 sales into the CAISO markets. As BPA staff explained, sellers into the CAISO
10 markets are not required to schedule energy deliveries on firm transmission.
11 Moreover, firm transmission is not an advantage in being awarded a sale in
12 CAISO’s markets because transmission information is not required by CAISO at
13 the time bids into its markets are due.

14 *Q: Please explain how the third reason for purchasing long-term firm service has*
15 *been eroded on the Southern Intertie?*

16 A: The financial advantage of purchasing long-term service instead of hourly service
17 depends critically on the number of hours that the transmission customer expects
18 to schedule on its reservation. For example, if a transmission customer anticipates
19 scheduling energy in every hour of the year, then long-term service will be less
20 expensive, over the course of the year, than purchasing hourly service in every
21 hour. This is because, even under the BP-16 rate, the hourly rate is more than

¹⁴ Fredrickson *et al.*, BP-18-E-BPA-12, at 6, lines 7-9.

1 simply a *pro rata* hourly share of the annual rate. If a transmission customer
2 anticipates scheduling energy in relatively few hours of the year, however, then
3 reserving hourly service only during the hours it is actually needed is likely to be
4 less expensive than purchasing long-term service. The fewer the number of hours
5 of anticipated use, the more financially attractive that hourly service becomes. As
6 explained by BPA staff, the changes in the CAISO markets have had the effect of
7 reducing the number of hours in which there is high demand for imports into
8 California. Consequently, the financial incentive for transmission customers to
9 invest in long-term service instead of hourly service on the Southern Intertie has
10 declined.

11 *Q: How does BPA staff's hourly rate proposal restore the financial incentive for*
12 *transmission customers to invest in long-term service instead of hourly service on*
13 *the Southern Intertie?*

14 *A:* Under the existing BP-16 rates, long-term service on the Southern Intertie is more
15 financially attractive than hourly service if a customer intends to schedule on the
16 transmission reservation in more than 80 hours per week. Under the proposed
17 BP-18 rate, long-term service becomes more financially attractive if a customer
18 intends to schedule on the transmission reservation in more than 25 hours per
19 week. Thus, the higher rate provides a financial incentive for customer to reserve
20 long-term service, even as the number of “high value hours” for sales into
21 California declines.

1 **SECTION 4: BPA STAFF’S SOUTHERN INTERTIE HOURLY RATE**
2 **PROPOSAL IS REASONABLE AND CONSISTENT WITH BPA’S**
3 **LONG-STANDING RATE DESIGN METHODOLOGY**

4 **A. BPA STAFF’S RATE PROPOSAL WAS DEVELOPED**
5 **THROUGH AN EXTENSIVE PUBLIC CONSULTATION**
6 **PROCESS**

7 *Q: Please describe the process through which BPA staff considered alternatives to*
8 *address Southern Intertie seams issues and potential solutions.*

9 A: BPA staff conducted an extensive process of publicly noticed, open workshops.
10 This also included numerous opportunities for customer and stakeholder feedback
11 in both written and oral form.

12 *Q: How did BPA staff document their consideration of options and alternatives?*

13 A: In addition to the materials presented at workshops, BPA staff also developed a
14 white paper to frame the issues and examine potential alternatives. BPA staff
15 made two draft versions of this document available for public review and
16 comment before putting forth a final version in February of 2016.

17 *Q: Please describe the workshop process.*

18 A: BPA staff conducted ten workshops during the period of October 2015 through
19 July of 2016. Materials for these workshops were made available in advance of
20 the meetings and are still available publicly on BPA’s website. The workshops
21 included presentations by BPA staff and also made time available for any party to
22 offer perspectives or analysis, request information, or ask questions. Outside of
23 the workshop process, BPA staff was also very responsive to inquiries on an
24 individual basis.

25 *Q: What opportunities were available for public comment?*

26 A: BPA staff solicited written public comments on at least six occasions during the

1 process and also accepted comments outside of those times.

2 *Q: Was participation in the workshop and comment process robust?*

3 A: Yes. Workshops were well attended by a wide variety of representatives of
4 diverse utility and stakeholder interests from the Pacific Northwest as well as
5 California. This diversity of participation was also reflected in the written
6 comments submitted to BPA.

7 *Q: Did BPA staff reasonably consider and document viewpoints and options that
8 were presented through public comments?*

9 A: Yes. BPA staff extensively analyzed, documented, and gave response to public
10 comments in a transparent manner.

11 *Q: Did BPA staff consider a wide range of both rate and non-rate alternatives to
12 resolve issues?*

13 A: Yes. As documented in BPA staff's white paper and workshop materials, a full
14 range of potential alternatives were considered in arriving at their current
15 proposal. This includes both rate and non-rate alternatives.

16 *Q: What are your conclusions regarding BPA staff's process for consideration in
17 arriving at their current proposed rate for hourly service on the Southern
18 Intertie?*

19 A: As described above, BPA staff conducted an extensive, robust, and transparent
20 public process to arrive at their BP-18 rate proposal for hourly service on the
21 Southern Intertie. All viewpoints and alternatives were reasonably considered to
22 arrive at this point.

1 **B. BPA STAFF’S RATE PROPOSAL CONTINUES THE COST-**
2 **BASED RATEMAKING APPROACH FOR THE**
3 **SOUTHERN INTERTIE**

4 *Q: Has BPA staff abandoned BPA’s prior cost-based ratemaking approach in*
5 *calculating the proposed hourly rate for the Southern Intertie?*

6 A: No. As described in Section 3.A, above, the rate design and methodology are
7 unchanged from prior rate cases. As in the BP-16 rate case, BPA staff continues
8 to propose to calculate rates for short-term service down to Daily Block 2 as a
9 simple *pro rata* share of the annual rate. That is, the rate for Daily Block 2
10 service is the annual rate divided by 365. Also as in the BP-16 rate case, the
11 Daily Block 1 rate is set to recover a one-week *pro rata* share of the annual rate
12 over five days of reservation. And, again adhering to the BP-16 rate
13 methodology, hourly service is set to recover the Daily Block 1 rate over a subset
14 of hours during that day. BPA staff’s proposed BP-18 hourly rate differs only in
15 the number of hours per day that is assumed in this formula. In prior rate cases,
16 that value was 16 hours per day; in the proposed rate, that value is 5 hours per
17 day.

18 *Q: Can the difference between the formulas used to calculate the hourly BP-16 rate*
19 *and BPA staff’s proposed hourly BP-18 rate be readily identified?*

20 A: Yes. The formulas used to calculate BPA staff’s proposed BP-18 Southern
21 Intertie rates are documented in Table 8 of BPA’s Transmission Rates Study and
22 Documentation.¹⁵ The corresponding formulas for the BP-16 rates were

¹⁵ Transmission Rates Study and Documentation, BP-18-E-BPA-08.

1 documented in Table 8 of the Errata to Transmission Rates Study and
2 Documentation.¹⁶ In Exhibit No. 7 of Attachment A to this testimony, the two
3 rate calculation tables are presented side by side, with the difference in the
4 formulas highlighted in red. As is readily apparent, the calculation of staff's
5 proposed BP-18 rate follows precisely the same approach as in BP-16, with the
6 only difference being the use of "24/5" as opposed to "24/16."

7 **C. BPA STAFF'S RATE PROPOSAL IS CONSERVATIVE**

8 *Q: BPA staff's proposed hourly rate for the Southern Intertie is a significant increase*
9 *over the BP-16 hourly rate. Is this increase excessive?*

10 *A: No. In fact, BPA staff's proposed rate could be viewed as conservative, given*
11 *that there are several reasons to support a rate that would be higher than the*
12 *proposed rate.*

13 *Q: In what ways is BPA staff's proposed hourly rate conservative?*

14 *A: As explained previously, the key factor driving the proposed rate is the change to*
15 *the number of hours per week that is assumed in the rate calculation. In prior rate*
16 *cases, the calculation used a value of 80 hours per week; staff's proposed rate is*
17 *based on a value of 25 hours per week. The use of 25 hours per week is*
18 *conservative in two key ways. First, it is based on information as of 2016, even*
19 *though the trends cited by BPA staff that result in a fewer number of peak hours*
20 *within the day in California are expected to continue and potentially accelerate.*
21 *Second, while staff's proposed rate recognizes that hourly service can be reserved*

¹⁶ Errata to Transmission Rates Study and Documentation, BP-16-E-BPA-07-E02.

1 and paid for just in the hours that a customer wants to use the service, it assumes
2 customers will reserve the 25 hours in every week of the year, which is a highly
3 conservative assumption.

4 *Q: Regarding the first issue, are the changes identified by BPA staff regarding*
5 *California’s changing net load shape expected to continue?*

6 *A:* Yes. While BPA staff’s testimony is based on information up to 2016, it is
7 important to note that the trends staff identified in the testimony are likely to
8 continue, and even to accelerate. For instance, the dramatic reduction in net load
9 during the mid-day hours—the so-called “belly of the duck”—reached levels in
10 2016 that CAISO had previously anticipated would not be reached until 2020.¹⁷
11 As the “duck belly” becomes larger and affects more hours, the demand for
12 energy imports into the CAISO will continue to decline. Moreover, the principal
13 driver of the “duck belly” phenomenon has been the addition of large amounts of
14 utility-scale solar generation. Utility-scale solar generation capacity in California
15 is approximately 9,000 MW at present, and is expected by CAISO to grow by
16 another 4,000 to 5,000 MW by 2020.¹⁸ Utility-scale solar additions are also
17 expected to be a large part of the renewable resources added beyond 2020 as
18 California seeks to meet its renewable target of 50% by 2030.¹⁹ Moreover, it is

¹⁷ CAISO, NREL, First Solar, *Using Renewables to Operate a Low-Carbon Grid*, January 11, 2017, at 11. (“CAISO Solar Study”), available at <http://www.caiso.com/Documents/UsingRenewablesToOperateLow-CarbonGrid.pdf>.

¹⁸ CAISO Solar Study at 9.

¹⁹ *Id.*

1 expected that “behind the meter” rooftop solar installations will grow by over
2 4,000 MW between now and 2020.²⁰

3 *Q: Regarding the second point, why is it conservative to calculate a rate using a*
4 *value of 25 hours per week?*

5 A: The principle behind BPA staff’s proposed hourly rate is to set it at a level “so
6 that a customer that reserves hourly transmission ... would pay the same amount
7 as a customer that has reserved long-term firm transmission.”²¹ BPA staff’s
8 proposed rate recognizes that customers reserving hourly service only pay for that
9 service during the specific hours they reserve it, and that they are likely to reserve
10 hourly service during the 25 high-value hours of each week. This is the basis for
11 the 25-hours-per week value in staff’s calculation. But while the proposed rate
12 considers that hourly service might be reserved in a limited number of hours per
13 week, it seems to not consider that hourly service might also be reserved in a
14 limited number of weeks per year.

15 *Q: Is hourly transmission service on the Southern Intertie reserved uniformly in all*
16 *weeks of the year?*

17 A: No. In fact, the patterns of hourly transmission reservation can vary substantially
18 from week to week. This is to be expected, given that the market conditions
19 between the Pacific Northwest and California are also highly variable throughout
20 the year. Data provided by BPA staff in this proceeding demonstrates that an

²⁰ CAISO Solar Study at 10.

²¹ Fredrickson *et al.*, BP-18-E-BPA-12, at 3, lines 10-13.

1 individual customer reserved hourly transmission service on the Southern Intertie
2 during an average of just under 30 weeks per year during FY 2015-2016.²² And
3 of the 22 transmission customers that reserved hourly transmission service during
4 that period, *none* did so in every week of the year.

5 *Q: Would the hourly rate be higher than BPA staff's proposed rate if the calculation*
6 *assumed hourly service would be reserved in fewer than 52 weeks per year?*

7 *A: Yes. If the hourly rate were designed to ensure that customers reserving long-*
8 *term firm service paid the same as a customer reserving hourly service in 25 hours*
9 *per week, but in just 30 weeks per year, the hourly rate would be approximately*
10 *20 mills per kWh, which is approximately 70 percent higher than BPA staff's*
11 *proposed rate.*²³

12 *Q: Are there other ways that the selective nature of hourly service can result in*
13 *customers reserving hourly service not paying the same as customers reserving*
14 *long-term service?*

15 *A: Yes. Even if a transmission customer reserves hourly service during 25 hours per*
16 *week and 52 weeks per year, as assumed in the rate calculation, the quantity that*
17 *the customer may reserve can vary in each hour. For instance, a customer could*
18 *reserve 35 MW of hourly service in one hour, but only 10 MW of hourly service*
19 *in other hours. In this example, the customer would pay for 35 MW of service*

²² See BPA staff's response to PP-BPA-26-37, reproduced in Attachment A. The average of "Count of weeks with a reservation," excluding customers with less than 1,000 MWh of reservations, was 25.5 weeks during FY 2015, and 32.8 weeks during FY 2016, for an overall two-year average of 29.1 weeks.

²³ $14.98 / (30 \text{ weeks} * 168 \text{ hours}) * (7/5) * (24/5) = 19.97 \text{ mills/kWh}$. 14.98 refers to the annual \$/kW to be recovered through Southern Intertie rates. See Transmission Rates Study and Documentation, BP-18-E-BPA-08, at Tbl. 8, line 15.

1 only during one hour, but would pay for a lower quantity of service in the other
2 hours. A customer reserving long-term transmission service has no such
3 flexibility: it must reserve and pay for the *maximum* amount of capacity it desires
4 for the entire duration of its long-term service agreement. For customers
5 reserving hourly service, the ability to reduce the quantity of reserved service
6 reduces the total cost paid, compared to being required to reserve a constant
7 amount over all hours of service.

8 *Q: Does JP01 now propose additional modifications to BPA staff's cost-based rate*
9 *methodology?*

10 A: No, not at this time. As stated previously, JP01 fully supports BPA staff's
11 proposed rate for hourly transmission service on the Southern Intertie as a
12 conservative first step to maintaining the incentives for BPA's customers to
13 choose long-term firm transmission service. BPA staff's proposed rate strikes an
14 appropriate balance between the need for decisive action while also limiting the
15 magnitude of the rate increase.

16 **D. BPA STAFF'S RATE PROPOSAL IS WELL WITHIN**
17 **OTHER COST-BASED BENCHMARKS FOR THE**
18 **SOUTHERN INTERTIE FACILITIES**

19 *Q: Are there other transmission providers that have established tariff rates for*
20 *service on the joint Southern Intertie facilities at levels similar to BPA's proposed*
21 *hourly rate?*

22 Yes. Three of the OATT transmission providers on the southern segments of the
23 Southern Intertie have established tariff rates for hourly transmission service at
24 levels similar to BPA staff's proposed hourly rate. Specifically, the tariff rates of
25 the Transmission Agency of Northern California (TANC), Sacramento Municipal

1 Utility District (SMUD), and Los Angeles Department of Water and Power
2 (LADWP) are as follows:

Transmission Provider	Path	Hourly Tariff (\$/MWh)
TANC	COTP	\$12.52
SMUD	COTP	\$11.14
LADWP	PDCI	\$10.81 (on-peak)

3 *Q: How does BPA staff's proposed hourly rate compare to BPA's cost of*
4 *transmission expansion?*

5 *A: BPA's current cost of transmission system expansion is estimated to be*
6 *\$27.48/MWh.²⁴ This is based on the cost of expanding transmission capacity*
7 *between the Pacific Northwest and California (i.e., for the same activity supported*
8 *by the Southern Intertie facilities). BPA staff's proposed hourly rate of*
9 *\$11.49/MWh is therefore less than half the cost of expanding transmission for*
10 *similar transactions.*

11 **SECTION 5: BPA STAFF'S RATE PROPOSAL MITIGATES THE POTENTIAL**
12 **FOR UNINTENDED ADVERSE CONSEQUENCES**

13 **A. BPA STAFF'S RATE PROPOSAL DOES NOT RAISE**
14 **CONCERNS REGARDING UTILIZATION OF THE**
15 **SOUTHERN INTERTIE**

16 *Q: Does BPA staff's proposed hourly rate raise concerns about reduced utilization of*
17 *the Southern Intertie?*

²⁴ See BPA Business Practice for Resale of Transmission Service, v. 10, at C.3.

1 A: No. In fact, by encouraging transmission customers to reserve long-term
2 transmission service instead of hourly transmission service, BPA staff's proposed
3 rate supports the maximum economic utilization of the Southern Intertie. As a
4 general matter, the use of the Southern Intertie facilities will be maximized when
5 the incremental charges that apply to that use are minimized. One way to
6 minimize incremental charges would be for BPA to offer hourly transmission
7 service on the Southern Intertie for free; this would maximize utilization, but it
8 would obviously also fail to recover the annual revenue requirements for the
9 Southern Intertie. Incremental charges can also be minimized by recovering the
10 cost of service through charges that apply whether the transmission service is used
11 or not. That is precisely what occurs when transmission customers invest in long-
12 term service on the Southern Intertie: they commit to paying for the reserved
13 capacity in fixed monthly amounts throughout the term of their service agreement.
14 And since the transmission customer pays for the long-term reservation regardless
15 of whether or not it schedules on it on any given hour or day, the customer has
16 every incentive to utilize the transmission service any time there is a beneficial
17 opportunity to do so.

18 *Q: Will the higher proposed hourly rate prevent the Southern Intertie from being*
19 *utilized when a transmission customer with a Firm reservation chooses not to*
20 *schedule on it?*

21 A: No, for several reasons. First, there is every reason to expect that customers that
22 invest in long-term firm service will schedule on their reservations anytime that
23 an economic opportunity is available. This is because a firm reservation can be

1 used not only to deliver energy from a transmission customer’s own resources,
2 but also to deliver energy that the transmission customer purchases in the liquid
3 and competitive market for electric power in the northwest. Second, a
4 transmission customer that holds a long-term firm reservation has the ability to re-
5 sell, transfer, or assign those rights to other eligible transmission customers. This
6 allows utilization of the Southern Intertie by other transmission customers during
7 periods when the long-term rights-holder does not intend to utilize the
8 reservations for their own use. In other words, reserving hourly transmission
9 service from BPA, at the proposed rate, is not the only way for “unused” firm
10 capacity to be made available to other transmission customers.

11 **B. BPA STAFF’S RATE PROPOSAL SUPPORTS, RATHER**
12 **THAN UNDERMINES, STABLE REVENUE RECOVERY**

13 *Q: Does BPA staff’s proposed hourly rate raise concerns regarding transmission*
14 *revenues for the Southern Intertie?*

15 *A:* No. While the higher hourly rate is projected to reduce the volume of hourly
16 sales, this does not raise concerns about transmission revenues for Southern
17 Intertie service overall, for two reasons. First, the lower quantity of hourly sales
18 will pay a higher rate, with the result that total revenues from the sale of hourly
19 service may not necessarily decline. Second, any reduction in hourly sales
20 revenues that may be experienced is more than offset by strengthening incentives
21 for continued sales of long-term firm service on the Southern Intertie.

22 *Q: Regarding the first point, do lower volumes of short-term sales undermine*
23 *revenue recovery on the Southern Intertie?*

1 A: No. The lower quantity of short-term sales is largely mitigated by higher
2 revenues for the sales that are made. For instance, BPA currently projects \$4.2
3 million in annual revenues from the sale of short-term service on the Southern
4 Intertie.²⁵ In the BP-16 rate case, BPA projected annual revenues of \$5.2
5 million.²⁶ In other words, BPA projects that annual revenues from the sale of
6 short-term transmission service on the Southern Intertie will be only \$1 million
7 less than in BP-16.

8 Q: *Regarding the second point, please put the change in BPA's projected revenues*
9 *from the sale of short-term service in the context of its reliance on the sale of*
10 *long-term transmission service for revenue recovery.*

11 A: One of the principal motivations behind BPA staff's hourly rate proposal is to
12 "maintain the incentive for customers to choose long-term firm transmission."²⁷
13 The loss of just 100 MW of long-term transmission service sales would reduce
14 BPA's transmission revenues by \$1.5 million.²⁸ With *several thousand*
15 megawatts of long-term firm reservations expiring or facing renewal decisions
16 during the BP-18 rate period, and with a limited queue of requests for new long-
17 term service, there is clearly far greater revenue at stake from long-term sales than
18 from any reduction in hourly sales.

²⁵ Transmission Rates Study and Documentation, BP-18-E-BPA-08 at Tbl. 12, row 27 Column G.

²⁶ Errata to Transmission Rates Study and Documentation, BP-16-E-BPA-07-E-E02 at Tbl. 12, row 25 Column G.

²⁷ Fredrickson *et al.*, BP-18-E-BPA-12, at 8, lines 24-25.

²⁸ 100 MW * \$1.248/kW-month * 12 months = \$1.498 million.

1 **C. BPA STAFF’S RATE PROPOSAL DOES NOT PRECLUDE**
2 **OTHER SOLUTIONS FOR ADDRESSING SEAMS ISSUES**
3 **ON THE SOUTHERN INTERTIE**

4 *Q: Does BPA staff’s rate proposal prevent future non-rates solutions?*

5 A: No. Nothing in BPA staff’s proposal would prevent future alternative solutions
6 from being pursued or implemented. For example, it is possible that a future
7 collaborative solution between BPA and the CAISO could resolve this and other
8 potential issues on the Southern Intertie. Indeed, the CAISO submitted comments
9 in the pre-rate case process noting its goals to “maintain reliability and open,
10 transparent, non-discriminatory markets” and that BPA staff’s proposed
11 alternatives would not conflict with these goals. There is also nothing to prevent
12 BPA from adopting incremental non-rates solutions on its own system for seams
13 issues on the intertie such as through changes in its business practices.

14 *Q: What other measures are available to BPA to address the potential for unexpected*
15 *negative consequences?*

16 A: In the event that the rate proposal creates unexpected negative outcomes, BPA
17 retains the ability to discount the rate to present levels at any time between rate
18 setting processes. This provides a “safety valve” that should alleviate concerns
19 regarding unintended consequences.

20 **D. BPA STAFF’S SOUTHERN INTERTIE HOURLY RATE**
21 **PROPOSAL IS DISTINGUISHABLE FROM RATES FOR**
22 **SERVICE ON ITS PRIMARY NETWORK**

23 *Q: Does the calculation for the hourly rate reflect characteristics that are unique to*
24 *the Southern Intertie?*

25 A: Yes. As explained above, BPA staff’s proposed hourly rate is driven by a revised
26 assumption in the rate calculation regarding the number of high-value hours

1 assumed to occur each week. That number has been 80 hours per week in prior
2 rate cases, and was reduced to 25 hours in the proposed hourly rate for the
3 Southern Intertie. BPA staff arrived at that number based on information specific
4 to the California energy markets, citing specifically to large additions of solar
5 generation and to the unique rules of the CAISO organized markets. These
6 California-specific circumstances do not apply to service on BPA's primary
7 transmission network.

8 *Q: Does this conclude your testimony?*

9 *A: Yes.*

ATTACHMENT A
TO DIRECT TESTIMONY OF JOINT PARTY 1

- Exhibit 1: Data Request and Response PP-BPA-26-27
- Exhibit 2: Data Request and Response PP-BPA-26-28
- Exhibit 3: Data Request and Response PP-BPA-26-29
- Exhibit 4: Data Request and Response PP-BPA-26-30
- Exhibit 5: Data Request and Response PP-BPA-26-31
- Exhibit 6: Data Request and Response PP-BPA-26-37
- Exhibit 7: Comparison of BP-16 and BP-18 rate calculations

EXHIBIT 1

Request ID: PP-BPA-26-27			
Request Date	Cite	Request Text	Response Text
12/09/16	Exhibit: BP-18-E-BPA-12 Page(s): 7-8 Line(s): 8-25	Please confirm that the AC Intertie is no longer fully subscribed on a long-term firm basis and that transmission capacity is available for long-term firm purchase.	Response Filed: 12/16/16 This is correct.

EXHIBIT 2

Request ID: PP-BPA-26-28			
Request Date	Cite	Request Text	Response Text
12/9/16	Exhibit: BP-18-E-BPA-12 Page(s): 7-8 Line(s): 17-25	Regarding the AC Intertie, and considering that long-term firm customers must submit renewal requests with one year's notice, please confirm that 1,416 MW of existing long-term firm service will face a deadline for renewal notification prior to the end of the BP-18 rate period. If this is not the correct amount facing renewal, please provide the correct figure and a supporting explanation.	Response filed 12/16/16 1,416 MW is the correct amount of MWs facing renewal.

EXHIBIT 3

Request ID: PP-BPA-26-29			
Request Date	Cite	Request Text	Response Text
12/09/16	Exhibit: BP-18-E-BPA-12 Page(s): 7-8 Line(s): 17-25	Regarding the AC Intertie: a) Please confirm that there are presently 195 MW of new [original] service requests in the long-term queue. If this is not the correct amount of requests, please provide the correct number and a supporting explanation. b) Please confirm that these requests are from Avangrid and from Cargill. c) Please confirm that Avangrid turned down long-term service on the AC Intertie the last time such service was offered to it. d) Please confirm that Cargill turned down long-term service on the AC Intertie the last time such service was offered to it.	Response Filed: 12/16/16 a) Correct. b) Correct. c) Correct. d) Correct.

EXHIBIT 4

Request ID: PP-BPA-26-30			
Request Date	Cite	Request Text	Response Text
12/9/16	Exhibit: BP-18-E-BPA-12 Page(s): 7-8 Line(s): 17-25	Regarding the DC Intertie: a) Please confirm that there are presently 717 MW of new [original] service requests in the long-term queue. If this is not the correct amount of requests, please provide the correct number and a supporting explanation. b) Please confirm that these requests are from Bonneville, Portland General Electric, LADWP, and Cargill. c) Please confirm that there are no requests in the queue for service beyond January 1, 2019.	Response filed: 12/16/16 File(s) Submitted for this Response: PP-BPA-26-30.pdf*

*File is reproduced following this exhibit.

EXHIBIT 5

Request ID: PP-BPA-26-31			
Request Date	Cite	Request Text	Response Text
12/9/16	Exhibit: BP-18-E-BPA-12 Page(s): 7-8 Line(s): 17-25	Regarding the DC Intertie, and considering that long-term firm customers must submit renewal requests with one year's notice, please confirm that 1,742 MW of existing long-term firm service will face a deadline for renewal notification prior to the end of the BP-18 rate period. If this is not the correct amount facing renewal, please provide the correct figure and a supporting explanation.	Response filed: 12/16/16 1,742 MW is the correct amount facing renewal.

EXHIBIT 6

Request ID: PP-BPA-26-37			
Request Date	Cite	Request Text	Response Text
12/09/16	Exhibit: BP-18-E-BPA-08 Page(s): 27 Line(s): 15-17	Please provide the following information on the quantity of Hourly service over the Southern Intertie (i.e., original requests for Hourly Firm or Hourly Non-Firm service only) for each of FY2015 and FY2016: 1. Name of Transmission Customer 2. Total volume (MWh of reservation) for the Transmission Customer 3. Total number of hours of reservation for the Transmission Customer 4. Total number of weeks in which the Transmission Customer reserved service in at least one hour. To be clear, this question seeks an updated version (for FY2015 and FY2016) of the spreadsheet, PX-BPA-40, that BPA provided in response to PX-BPA-25-40 in the BP-16 rate case. If only some of this information is available, please provide that which is available.	Response Filed: 12/16/16 Please see attached workbook. File(s) Submitted for this Response: PP-BPA-26-37_Data.xlsx*

* Attachment to the data response not included due to volume.

EXHIBIT 7

Table 8 Calculation of Intertie Rates				
(A)	(B)	(C)	(D)	(E)
FY 2016/2017	Source	Costs	Sales	Rates
1	Intertie Costs	\$000/Yr	aMW	
2	Rate Development Costs	Table 3, line 36 (D)		
3	Southern Intertie Sales			
4	Long-term agreements	Table 4, line 58 (O)	6,116	
5	Short-term daily block 1	Table 5, line 52 (O)	60	
6	Short-term daily block 2	Table 5, line 53 (O)	53	
7	Short-term hourly firm	Table 5, line 54 (O)	93	
8	Short-term hourly non-firm	Table 5, line 55 (O)	-	
9	Sales used for cost allocation			
10	Long-term agreements	Line 4	6,116	
11	Daily block 1 (day 1 through 5)	Line 5 x (7/5)	83	
12	Daily block 2 (day 6 and beyond)	Line 6	53	
13	Short-term hourly	(Line 7 + line 8) x (7/5) x (24/16)	196	
14	Total cost allocation sales	Sum of lines 10 through 13	6,449	
15	IS rate calculation			
16	Annual (\$/kW-yr)	Line 2 / line 14		15.58
17	Monthly (\$/kW-mo)	Line 16 / (12)		1.298
18	Daily block1 (\$/kW-day)	Line 16 / (365.5) x (7/5)		0.060
19	Daily block2 (\$/kW-day)	Line 16 / (365.5)		0.043
20	Hourly (mills/kWh)	Line 16 / (8.772) x (7/5) x (24/16)		3.73

Source: BP-16-E-BPA-07-E-E02, Tbl. 8

Table 8 Calculation of Intertie Rates				
(A)	(B)	(C)	(D)	(E)
FY 2018/2019	Source	Costs	Sales	Rates
1	Intertie Costs	\$000/Yr	aMW	
2	Rate Development Costs	Table 3, line 33 (D)		
3	Southern Intertie Sales			
4	Long-term agreements	Table 4, line 66 (O)	6,042	
5	Short-term daily block 1	Table 5, line 42 (O)	5	
6	Short-term daily block 2	Table 5, line 43 (O)	6	
7	Hourly	Table 5, line 44 (O)	40	
8	Sales used for cost allocation			
9	Long-term agreements	Line 4	6,042	
10	Daily block 1 (day 1 through 5)	Line 5 x (7/5)	7	
11	Daily block 2 (day 6 and beyond)	Line 6	6	
12	Hourly	Line 7 x (7/5) x (24/5)	268	
13	Total cost allocation sales	Sum of lines 9 through 12	6,324	
14	IS rate calculation			
15	Annual (\$/kW-yr)	Line 2 / line 13		14.98
16	Monthly (\$/kW-mo)	Line 15 / (12)		1.248
17	Daily block1 (\$/kW-day)	Line 15 / (365) x (7/5)		0.057
18	Daily block2 (\$/kW-day)	Line 15 / (365)		0.041
19	Hourly (mills/kWh)	Line 15 / (8.76) x (7/5) x (24/5)		11.49

Source: BP-18-E-BPA-08, Tbl. 8

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing on the Bonneville Power Administration's Office of General Counsel, the Hearing Clerks, and all litigants in this proceeding by uploading it to the BP-18 Rate Case secure website pursuant to BP-18-HOO-02 and BP-18-HOO-05.

DATED: January 31, 2017.

/s/ Tyler S. Johnson

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