

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

**2012 WHOLESALE POWER AND
TRANSMISSION RATE ADJUSTMENT
PROCEEDING**

Docket No. BP-12

**INITIAL BRIEF OF CALPINE AND TRANSALTA ENERGY
MARKETING ON THE ISSUE OF THE PROPOSED RATE FOR
DISPATCHABLE ENERGY RESOURCE BALANCING SERVICE**

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CALPINE AND TRANSALTA ENERGY MARKETING EXHIBITS LIST

The following exhibits were proffered during these proceedings. The status of each as of the filing date of this brief are as indicated.

<u>Exhibit</u>	<u>Subject</u>	<u>Status</u>
BP-12-E-CP-02	Testimony of Mark J. Smith, Rick Colgan, and Stephen Lincoln, Witnesses for Calpine and Transalta Energy Marketing	Admitted
BP-12-Q-CP-02	Qualification Statement of Rick Colgan	Admitted
BP-12-Q-CP-03	Qualification Statement of Stephen Lincoln	Admitted
BP-12-Q-CP-04	Qualification Statement of Mark J. Smith	Admitted
BP-12-E-CP-03	Surrebuttal Testimony of Mark J. Smith and Stephen Lincoln, Witnesses for Calpine and Transalta Energy Marketing	Admitted
BP-12-E-CP-04	Affidavit of Stephen Lincoln	Admitted
BP-12-E-CP-05	Affidavit of Mark J. Smith	Admitted
BP-12-E-CP-06	Affidavit of Rick Colgan	Admitted

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**INITIAL BRIEF OF CALPINE AND TRANSALTA ENERGY
MARKETING ON THE ISSUE OF THE PROPOSED RATE FOR
DISPATCHABLE ENERGY RESOURCE BALANCING SERVICE**

I. INTRODUCTION AND EXECUTIVE SUMMARY

In accordance with the procedural schedule established on March 13, 2011, Calpine Corporation (“Calpine”) and TransAlta Energy Marketing (U.S.) Inc. (“TransAlta”) hereby submit their initial brief in this rate proceeding of the Bonneville Power Administration (“BPA”). This brief addresses the single issue raised by Calpine and TransAlta in the transmission portion of this proceeding: the proposed rate and terms of service for Dispatchable Energy Resource Balancing Service (“DERBS”).

DERBS is intended by BPA “to encourage customers to reduce their station control error to reduce their balancing needs and their monthly bill.” BP-12-E-BPA-29, p. 42, lines 16-17. Even with the substantial and welcomed modifications presented in BPA’s rebuttal testimony,¹ which are completely consistent with the achievement of BPA’s intended goals, adoption of the DERBS charge at this time would be unjust, unreasonable, and unduly discriminatory to transmission customers that operate thermal, dispatchable energy resources within the BPA Balancing Area.

¹ Calpine and TransAlta specifically appreciate the efforts of staff to redesign DERBS to remove the highly troubling pro-rata allocation of charges and penalty charges.

1 For the reasons stated in this brief and the testimony of their expert witnesses, Calpine
2 and TransAlta request that BPA not adopt a DERBS rate for the upcoming transmission-rate
3 period. Instead, we ask BPA first to adopt intra-hourly transmission scheduling for *all*
4 transmission customers during the 2012 rate period. Once BPA gives its thermal-generating
5 customers the flexibility to schedule transmission service more frequently, those customers will
6 finally have the key tool they need to minimize their use of balancing reserve capacity, thereby
7 achieving BPA's objective.

8 Imposing a DERBS rate without first implementing intra-hourly scheduling would
9 unfairly place the cart before the horse, potentially creating the kind of undue discrimination that
10 is the object of the Notice of Proposed Rulemaking of the Federal Energy Regulatory
11 Commission ("FERC") regarding the integration of variable energy resources, Docket No.
12 RM10-11-000 (Nov. 18, 2010). Therefore, BPA should implement intra-hourly scheduling
13 during its 2012 rate period, and defer adoption of a DERBS charge to a subsequent rate period.

14 If BPA nonetheless decides to adopt a DERBS rate for the 2012 rate period, Calpine and
15 TransAlta request that its implementation be postponed within that rate period until BPA adopts
16 intra-hourly scheduling on at least a 30-minute basis for all transmission customers.
17 Additionally, BPA should make the following changes to any DERBS rate it chooses to adopt at
18 this time:

- 19 • Adopt the fully variable rate alternative advanced by BPA in its rebuttal testimony
20 (the so-called "dead-band" alternative), rather than the "base charge" alternative;
- 21 • Reduce the unit per-MW charges in the DERBS rate to reflect the salutary effect
22 of intra-hourly scheduling on the use of balancing reserve capacity, and the
23 resulting reduction in BPA's associated revenue requirement; Calpine and
24 TransAlta propose that these unit charges be reduced by 50 percent; and
- 25 • Add specificity to BPA's assurance that DERBS charges will be waived under
26 certain conditions by giving customers an explicit list of such conditions.

Each of these changes are shown at the end of this brief in Attachment A, a redlined edit to the DERBS rate schedule proposed by BPA on rebuttal in Attachment 1, Section F, ACS-12 Rate Schedule, to BPA's rebuttal testimony. BP-12-E-BPA-47, page 1-34.

II. STATEMENT OF RELEVANT FACTS

A. Calpine

Founded in 1984, Calpine operates 92 power plants with combined installed capacity of approximately 28,000 MW. In the Northwest, Calpine owns and operates the Hermiston combined-cycle power plant with base-load capacity of 547 MW and peaking capacity of an additional 69 MW. Hermiston is located within the BPA Balancing Area and would be subjected to DERBS charges, if approved. Calpine is a major customer of BPA transmission service and ancillary services.

B. TransAlta

In business for 100 years, TransAlta is an international company with 80 generating resources in the United States, Canada, and Australia. In the Northwest, TransAlta schedules power from the 1,376 MW Centralia coal-fired power plant, which provides approximately 10 per cent of Washington State's power. Co-located at the Centralia site is TransAlta's Big Hanaford plant, a 248-megawatt gas-fired combined-cycle generating facility. Both Centralia and Big Hanaford operate within BPA's Balancing Area and would be subjected to DERBS charges, if approved. Like Calpine, TransAlta is a major customer of BPA transmission service and ancillary services.

C. Practical Limitations on Scheduling Thermal Generating Capacity

BPA's experience in operating a hydro-based system does not translate precisely to the different operating characteristics of thermal power resources. Presently, the BPA system is

1 based on hourly transmission scheduling. Within each hour, BPA expects thermal generators to
2 produce flat blocks of energy across each hour that change in amount only at the top of the next
3 hour. When inter-hour changes in output (ramps) occur, BPA expects that the change will occur
4 at a linear rate exclusively within a 20 minute span – from 10 minutes before the hour to 10
5 minutes after the hour. The linear rate is calculated each hour by dividing the MW change by the
6 20 minute ramp period. With a minor exception, BPA simply expects the generator to ramp
7 precisely and unvaryingly according to its calculation.²

8 This expectation does not track with the operating realities of thermal-generation.
9 Although it is flexible, thermal generation is not as responsive as unconstrained hydroelectric
10 generation. Particularly during start-up, shut-downs, and output ramps, thermal operators must
11 carefully balance temperature, pressure, and emissions in order to avoid potentially serious
12 consequences to the reliability of their equipment and the health and safety of their employees.
13 BP-12-E-CP-02, pp. 15-16:

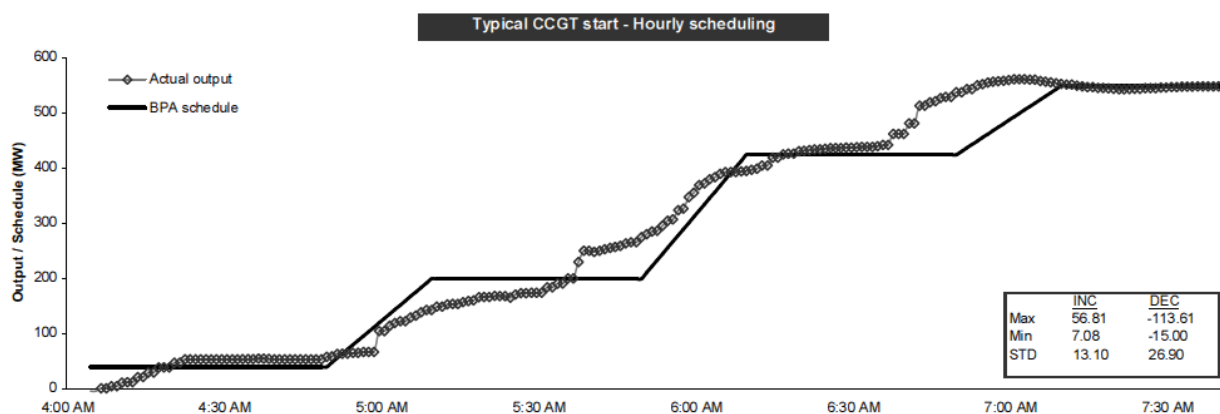
- 14 • Excessively rapid changes in temperature increase wear-and-tear on the metal
15 components of a thermal plant, accelerating physical deterioration, increasing operation
16 and maintenance (O&M) and associated costs. *Id.*, p. 16, lines 3-8.
- 17 • Uncontrolled changes in steam pressure can create serious safety hazards for both coal-
18 fired and combined-cycle-gas generation. *Id.*, p. 16, lines 9-16.
- 19 • Fuel consumption is less efficient during changes in generation level. Relatively
20 speaking, air emissions associated with higher rates of fuel consumption are typically
21 higher per unit of output during start-up, shut-downs, and output ramps. *Id.*, pp. 16-17.

² BPA does permit some variability through the proposed 2 MW deadband. Calpine and TransAlta support modifications to that deadband proposal below.

Thermal plant optimization during start-up, shut-downs, and ramps is akin to the mathematical problem of solving simultaneous equations. Thermal generation output is unlikely to be able to continuously conform with BPA's simplifying assumption of linear ramping because plant operators must be mindful of critical corresponding changes in plant temperature, pressure, fuel consumption, and air emissions. Thermal generation can be quite flexible, but it by no means meets the precision or infinite ramping capability suggested by BPA's rate design.

The difference between BPA's simplifying assumptions about thermal-generation dispatch and practical operating realities is shown in Chart 1. The solid stair-step line in Chart 1 depicts BPA's idealized assumption about changes in output, under an hourly transmission-scheduling regime, as a combined-cycle plant is started up and brought to full load. This is the power-ascension stair-step that a generator would have to follow, precisely, in order to avoid the imposition of DERBS charges. In contrast, the dotted line shows a representative ascension curve of an actual start of a combined-cycle plant in order to moderate wear-and-tear on the plant, avoid excessive pressure changes, moderate fuel consumption, and minimize air emissions.

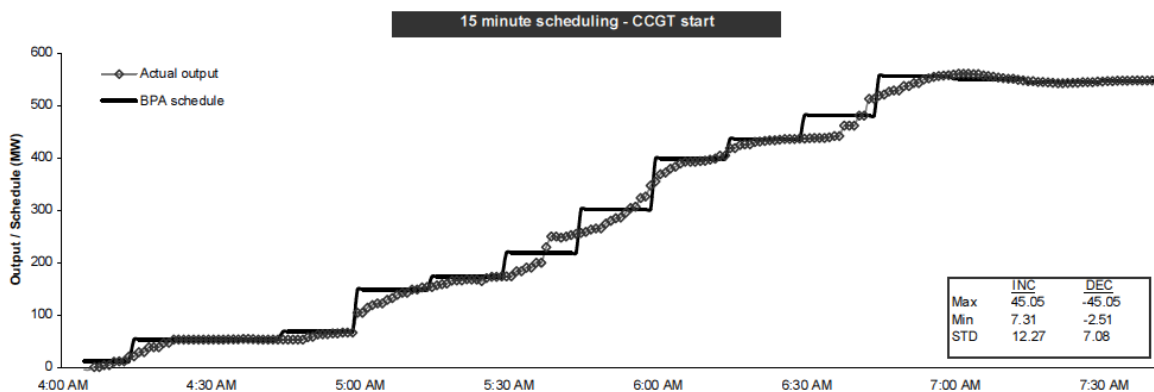
Chart 1



See, BP-12-E-CP-02, p. 18.

The differences between the two lines represent what BPA characterizes as “station control error” and, on a maximum one-minute frequency, would be the basis of DERBS charges. These maximum one-minute station control errors (and DERBS charges) would be substantial (in the thousands of dollars) in this example and would clearly and substantially affect economic start and shut-down decisions. Units, once started, would tend to stay on line – even if over-generation conditions were anticipated – until their possible losses exceed the shut-down and start-up DERBS-related costs. Chart 1 should be compared to the following Chart 2.

Chart 2



See, BP-12-E-CP-02, p. 22.

The dotted line in Chart 2 is identical to the one shown in Chart 1 – the typical start-up ascension curve of a combined-cycle plant. However, the solid lines differ between the two charts. The solid line in Chart 2 depicts transmission scheduling during start-up of the same combined-cycle plant, but under an optimized 15-minute, intra-hourly transmission scheduling regime.

With the extra scheduling granularity afforded a thermal-plant operator by 15-minute, intra-hourly scheduling, the station control error of Chart 2 lessens significantly as the differences between scheduled and actual plant outputs shrink over the entire start-up ascension.

1 With this added scheduling information, BPA would need to dispatch far fewer balancing
2 reserves, and plant operators would be exposed to much lower DERBS charges. Even a new
3 transmission-scheduling regime that provided 30-minute, intra-hourly scheduling would give
4 BPA much more information and thermal-plant operators considerably more flexibility with
5 which to minimize variations between scheduled and actual plant output, thereby minimizing
6 exposure to DERBS charges.

7 If BPA were to implement DERBS before implementing intra-hourly scheduling, it will
8 increase the burdens on thermal-plant operators as they have to solve one additional equation
9 simultaneously every time they start-up, shut-down, or ramp their generation. In seeking to
10 avoid DERBS charges, plant operators would be forced to increase plant wear and tear, reduce
11 fuel efficiency, and/or increase air omissions.

12 **III. ARGUMENT**

13 **A. BPA Should Postpone DERBS Adoption to a Later Rate Period, After It Adopts** 14 **Intra-Hourly Transmission Scheduling for Thermal Generating Resources, and** 15 **Then Reassess the Need for any such Charge in Light of New Experience.**

16 As the flexibility of the Northwest hydro system becomes further constrained, and as
17 fleets of renewable resources add to the Northwest energy supply -- but only intermittently -- the
18 regional power system will need to rely like never before on non-Federal thermal generation.
19 This thermal generation offers much of the flexibility required by BPA in the future; however,
20 even the most responsive thermal generation faces practical limitations on its ability to precisely
21 control start-up, shut-down, and ramping. BPA should therefore be providing all thermal
22 generators with the tools needed to minimize the use of precious balancing reserves while
23 optimizing their flexible response capabilities. One such tool is intra-hourly scheduling, ideally
24 on a 15-minute basis, but at least on a 30-minute basis.

1 BPA is well aware of the value of this tool and has announced its intention to implement
2 30-minute intra-hourly scheduling during the upcoming rate period. On page 10 of its comments
3 filed on April 12, 2010 in the rulemaking proceeding on the integration of variable energy
4 resources, Docket No. RM10-11-000, BPA explained to FERC:

5 The region is also advancing in the area of intra-hourly scheduling. A Joint
6 Initiative among ColumbiaGrid, Northern Tier Transmission Group, and
7 WestConnect has developed generic business practices for intra-hour transmission
8 scheduling. BPA and several other regional utilities have posted customized
9 versions of those business practices and a voluntary, bilateral intra-hour market
10 has begun to develop in the Northwest. The joint initiative is also developing an
11 automated Dynamic Scheduling System as well as an electronic bulletin board to
12 help reduce transaction costs and increase liquidity in the intra-hour market.

13 BPA acknowledges that this change can be accomplished immediately under its Open Access
14 Transmission Tariff. “From BPA’s perspective, the current *pro forma* tariff generally
15 contemplates submission of schedules before the hour, but it allows flexibility for transmission
16 providers to accept late schedules and does not prohibit intra-hour scheduling.” *Id.*, p. 48.

17 Unfortunately, BPA has unduly and discriminatorily limited the applicability of intra-
18 hour scheduling to wind resources. We propose that BPA drop any limitations of its intra-hour
19 pilot (e.g., limits on total MW or limits on technology) and allow *all* transmission customers to
20 participate as soon as possible. More importantly, BPA proposes to put the cart before the horse
21 in this rate proceeding by adopting, prematurely, a new rate for DERBS. In so doing, BPA
22 would exacerbate a situation that FERC believes to be unduly discriminatory. Moreover, rates
23 like DERBS, in a scheduling regime constrained to hourly scheduling, are not just and
24 reasonable. FERC’s preliminary findings and conclusions in Docket No. RM10-11-000 are
25 instructive:

26 The Commission believes that it is unduly discriminatory to perpetuate the
27 practice for resources to match hourly transmission schedules, especially when
28 the output of a resource (such as a VER) fluctuates beyond its reasonable control.
29 Moreover, the Commission believes that requiring public utility transmission

1 providers to procure ancillary services to manage generating resources' deviations
2 across an operating hour is an inefficient and burdensome operating protocol with
3 the potential to result in unjust and unreasonable rates. Therefore, in order to
4 prevent excessive costs attributable to reserve services, an over-reliance on these
5 reserve services in maintaining overall system balance, and undue discrimination
6 against VERs, the Commission proposes to reform existing transmission
7 scheduling practices. Under this proposed reform, all transmission customers will
8 have the opportunity to take advantage of the shorter scheduling intervals and
9 submit accurate intra-hour schedules, thereby mitigating the amount of regulation
10 reserves or other ancillary services public utility transmission provider will need
11 to procure.

12
13 133 FERC ¶ 61,149, slip op. at 33 (numbered paragraph 39, emphasis supplied). Given these
14 forceful, albeit preliminary, conclusions by FERC in the VER NOPR, it seems unwise for BPA
15 to advance a DERBS rate for confirmation and approval before first implementing intra-hourly
16 scheduling.

17 Although the FERC rulemaking focuses on variable energy resources, the quoted passage
18 makes clear FERC's intention to make intra-hourly scheduling available to "all transmission
19 customers." Moreover, if BPA were to offer intra-hour scheduling only to variable energy
20 resources, it would potentially be causing undue discrimination against thermal generators.
21 Under these circumstances, the solution to is quite simple: first implement intra-hourly
22 transmission scheduling for thermal generators, then re-forecast the need for balancing reserve
23 capacity in light of experience under intra-hourly scheduling and, finally, adopt in a subsequent
24 rate case the DERBS charge (if any) then deemed necessary by BPA. Postponement would also
25 allow BPA to review the beneficial results of lowered balancing reserve requirements, and avoid
26 any adverse environmental consequences of the DERBS rate.

27 **B. If BPA Proceeds to Adopt a DERBS Rate at this Time, It Should Delay**
28 **Implementation of that Rate Until Later in the Upcoming Rate Period, After It**
29 **Adopts Intra-Hourly Transmission Scheduling For Thermal Generators.**

30 If BPA concludes that it must adopt a DERBS charge at this time, it should at least give
31 its transmission customers a fair chance to minimize their exposure to this charge. As shown in

1 the two charts found above on pp. 5 and 6, intra-hourly scheduling will give customers that
2 chance. Once intra-hourly scheduling becomes available to thermal generators, those operators
3 adopting this new tool can reasonably minimize their use of balancing reserves. Those operators
4 who fail to adopt intra-hourly scheduling can then be fairly asked to bear the cost of the
5 balancing reserve capacity made available to them. Language to accomplish this delayed
6 implementation of DERBS may be found in the opening paragraph of Attachment A to this brief.

7 **C. If BPA Proceeds to Adopt a DERBS Rate at this Time, It Should Adopt the Fully**
8 **Variable Rate (“Dead Band”) Alternatively Advanced in Its Rebuttal Testimony,**
9 **with Two Important Modifications.**

10 We appreciate the modifications made by BPA to its DERBS proposal in its rebuttal
11 testimony. However, because of the extremely short timeframe available following BPA’s
12 rebuttal testimony, Calpine and TransAlta were unable to fully evaluate the impacts of BPA’s
13 two alternative forms of DERBS rate design prior to filing their Surrebuttal testimony. After
14 further review, Calpine and TransAlta request that BPA drop the fixed/variable alternative found
15 on page 2 of its rebuttal testimony (BP-12-E-BPA-47, page 2). If BPA were to adopt DERBS at
16 this time, we ask that it utilize the variable rate alternative found on page 3 of that testimony,
17 which BPA’s witnesses state would also achieve their objective.

18 Under the variable rate alternative, generators would have the best opportunity to
19 “minimize use of balancing reserve capacity by dispatchable energy resources” because if they
20 use no balancing reserves, they would receive no charges. Such a design creates a significant
21 and continuous incentive to reduce dependence on BPA reserves, while an unavoidable fixed
22 charge creates no incentive. In addition, the variable rate design would not expose generators to
23 DERBS charges for months in which a thermal plant was off-line and not utilizing any reserve
24 capacity. BP-12-E-CP-03, page 8, lines 9-16. Attachment A to this brief shows, in redline form,
25 our recommended changes to Section F of the draft rate schedule advanced by BPA in rebuttal.

1 However, this is not a complete solution to the issues raised by DERBS. Even this
2 variable rate alternative has serious problems that should still be resolved. We address in the
3 remainder of this section the three problems of greatest concern to Calpine and TransAlta.

4 First, the variable DERBS rate alternative includes a dead band of only 2 MW for both
5 incremental (INC) and decremental (DEC) reserves *regardless of the size of the generator*. The
6 operator of a 10-MW thermal generator would be able to deviate from schedule by 20 percent
7 without payment of a DERBS charge, whereas the comparable percentage for 2 MW of the 547-
8 MW Hermiston plant would be only 0.37 percent. Use of this static 2 MW dead band would
9 hold larger units to a much higher standard of scheduling and operational precision, and thereby
10 unduly penalize the generators that are making the greatest contributions to Northwest energy
11 supplies. Fairness dictates that the alternative variable rate design be modified, as proposed on
12 surrebuttal by Calpine and TransAlta, to provide a dead band of 2 percent of nameplate capacity,
13 but not less than 2 MW nor greater than 20 MW. *See* BP-12-E-CP-03, page 7, lines 13-17.

14 Second, the per-unit charges under either alternative rate proposed by BPA on rebuttal
15 would materially over-recover BPA's associated revenue requirement for imbalance reserve
16 capacity during the rate period. As illustrated by Charts 1 and 2 above, the use of imbalance
17 reserves is certain to drop as soon as intra-hourly scheduling is available to thermal generators,
18 either with or without concurrent imposition of DERBS charges. In addition, we anticipate a
19 price- or cost-related demand response. Indeed, BPA has already noted a significant drop in the
20 use of DEC reserves, which Calpine and TransAlta attribute to the imposition of infrequent but
21 substantial Failure-To-Comply ("FTC") penalties. *Id.* p. 5, lines 8-18. A corresponding and
22 further reduction in the use of both INC and DEC reserves only awaits the imposition of a
23 DERBS rate.

1 No one, including BPA, can estimate with certainty the magnitude of the price-response
2 that will accompany implementation of DERBS. However, based on the substantial reduction in
3 the use of balancing reserves identified by BPA in rebuttal, along with the reductions associated
4 with intra-hour scheduling, Calpine and TransAlta believe that a reduction in the use of reserves
5 by 50 percent is a reasonable estimate. If this reduction does indeed occur, the revenue
6 requirement proposed by BPA is commensurately overstated by 50 percent and, therefore, the
7 per-unit charges under any DERBS rate imposed by BPA should be cut by 50 percent. *See BP-*
8 *12-E-CP-03*, page 5, line 1 through page 6, line 12. Specifically, under the variable rate
9 alternative, the charge for INC reserves should be lowered to \$7.22 per MW, and the DEC
10 reserve charge should be reduced to \$1.88 per MW. *See Attachment A to this brief.*

11 Finally, prior to implementing DERBS, BPA should ensure that there is a clear and
12 unambiguous basis for the calculation of station control error. Calpine and TransAlta strongly
13 recommend that BPA implement technology that would provide generators with a specific “Go-
14 To” point. *See BP-12-E-CP-03*, page 6, line 13 through page 7, line 7. That Go-To dispatch
15 point would then be compared to telemetered generation output in order to attain a station control
16 error. Absent such an automated minute-by-minute signal, BPA should reconsider the frequency
17 of determining the station control error, and use, as suggested in Calpine and TransAlta’s rebuttal
18 testimony, a 10-minute average station control error. At a minimum, BPA should develop a
19 detailed business practice that will describe the calculation of DERBS charges under various
20 operational conditions.

1 **D. BPA Acknowledges that Imposition of a DERBS Charge Should be Subject to**
2 **Waiver Under Some Conditions; Any DERBS Rate Schedule Adopted at this Time**
3 **Should Explicitly Identify All Such Conditions as a Guide to BPA's Customers.**
4

5 BPA and its customers agree that DERBS charges should be waived when a customer
6 deviates from a transmission schedule due to a BPA dispatch order or other similar contingency.
7 To help guide them in plant operations, customers need and deserve to know with specificity
8 exactly what the circumstances for waiver will be. Greater clarity will also help to minimize the
9 situations, during or after the fact, in which reasonable minds might disagree about whether a
10 waiver should be or has been granted. Attachment A to this brief expands, in redline form, on
11 the exceptions to DERBS charges set forth in BPA's draft rate schedule. Our recommendations
12 are taken from page 9 of our surrebuttal testimony, BP-12-E-CP-03, p. 9, lines 7-22.

13 **IV. Conclusion**
14

15 For the reasons stated in this brief, Calpine and TransAlta respectfully requests that BPA
16 first make intra-hourly scheduling available to all of its transmission customers, then reassess the
17 need for a DERBS rate. If and when BPA adopts a DERBS rate, it should: (a) adopt the variable
18 rate alternative described in its testimony; (b) utilize a dead band of 2 percent of nameplate
19 capacity, but not less than 2 MW nor greater than 20 MW; (c) reduce its reserve charges by 50
20 percent; (d) provide generators with a Go-To dispatch point, and; (e) define with specificity the
21 circumstances under which a waiver will be granted. These recommendations are reflected in
22 Attachment A.

23 Dated: May 2, 2011.

24 Respectfully submitted,

25
26 Davis Wright Tremaine LLP

27
28 /s/ Craig Gannett

29 By: Craig Gannett

30 Attorney for Calpine Corporation and TransAlta

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ATTACHMENT A

F. DISPATCHABLE ENERGY RESOURCE BALANCING SERVICE

The rate below applies to all non-Federal Dispatchable Energy Resources of 3 MW nameplate rated capacity or greater in the BPA ~~Balancing Control~~-Area, as soon as intra-hour scheduling is available to all transmission customers in that Balancing Area, except as provided in section III.F.3. Dispatchable Energy Resource Balancing Service is required to help maintain the power system frequency at 60 Hz and to conform to NERC and WECC reliability standards.

1. RATES

The rates for Dispatchable Energy Resource Balancing Service shall not exceed:

~~Monthly Base Rate = \$22.34 per MW~~

Hourly Variable Rate:

(i) Incremental Reserves = ~~\$14.44~~7.22 per MW

(ii) Decremental Reserves = ~~\$3.76~~1.88 per MW

2. BILLING FACTOR

- (a) ~~The billing factor for the Monthly Base Rate is the greater of the maximum one-minute average generating capability of the Dispatchable Energy Resource as measured by BPA or the Dispatchable Energy Resource's nameplate generating capability.~~ Station control error refers to, in each hour, the maximum ten-minute average difference between actual generation output based on meter data and the sum of the transmission schedules, including Generation Imbalance Deviation Band 1 Payback Schedules. Station control error can be negative as a result of under-generation or positive as a result of over-generation.
- (b) The hourly billing factor for use of Incremental Reserves is the maximum ~~one~~ten-minute negative station control error (under-generation), including ramp periods, that exceeds 2 percent of the nameplate capacity of the generator, but not less than 2 MW nor greater than 20 MW for that hour.
- (c) The hourly billing factor for use of Decremental Reserves is the maximum ~~one~~ten-minute positive station control error (over-generation), including ramp periods, that exceeds 2 percent of the nameplate capacity of the generator, but not less than 2 MW nor greater than 20 MW for that hour

1 **3. EXCEPTIONS**
2

3 (a) This rate will not apply to a Dispatchable Energy Resource, or portion of a
4 Dispatchable Energy Resource, that, in BPA's determination, has put in
5 place, tested, and successfully implemented no later than the 15th day of
6 the month prior to the billing month, the dynamic transfer of plant output
7 out of BPA's Balancing Authority Area to another Balancing Authority
8 Area.

9 (b) This rate will not apply during any hour in, or for, which:

10 (i) BPA has issued a Dispatch Order (of any kind, including
11 redispatch, Environmental Redispatch, or transmission curtailment
12 or outage-related order or request) and customer's generator is
13 responding to such order or for hours during which customer's
14 generator is coming back on line after responding to such order;

15 (ii) customer's generator has a qualifying contingency event and has
16 called on contingency energy;

17 (iii) an e-tag has been curtailed;

18 (iv) customer's generator is requested to go offline by the local utility;

19 (v) customer is changing generation levels to avoid a Failure to
20 Comply (FTC) charge; or

21 (vi) BPA waives the charge because the generator was responding to or
22 recovering from an emergency or reliability concern not described
23 above.

2012 WHOLESALE POWER AND TRANSMISSION RATE ADJUSTMENT PROCEEDING

CERTIFICATE OF SERVICE

/s/ Craig Gannett
Craig Gannett