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August 21, 2019

VIA Electronic Filing

Chief Administrative Law Judge Nolan Moser
Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, Oregon 97301

RE: UE 358 – Rebuttal and Cross Answering Testimony of Calpine Energy Solutions, LLC

Dear Chief Administrative Law Judge Moser:

Enclosed for filing is the rebuttal and cross-answering testimony of Calpine Energy Solutions, LLC ("Calpine Solutions") in the above-referenced docket. This includes Calpine Solutions/200 and Calpine Solutions/300-301.

As we discussed yesterday, the testimony of Greg Bass (Calpine Solutions/200) includes information that Calpine Solutions has designated as subject to the general protective order in this docket. As a matter of practice, Mr. Bass does not intend to obtain or review information designated by other parties as subject to the protective order. Therefore, Mr. Bass has not executed the protective order in this case or viewed any information designated by other parties as subject to the protective order. The only information subject to the general protective order that Mr. Bass has reviewed is the information produced by Calpine Solutions through discovery or in his own testimony. Under these circumstances, our understanding is that there is no need for Mr. Bass to execute the general protective order, and he would prefer not to if possible.

Please contact me with any questions regarding this matter.

Sincerely,

Gregory M. Adams
Attorney for Calpine Energy Solutions, LLC

cc: UE 358 Service List (via electronic filing)

Calpine Solutions Exhibit 200
Witness: Greg Bass

BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON

New Load Direct Access	)	
Portland General Electric Company	)	**Docket No. UE-358**

Cross-Answering and Rebuttal Testimony of Greg Bass

on behalf of

Calpine Energy Solutions, LLC

August 21, 2019

CROSS ANSWERING AND REBUTTAL TESTIMONY OF GREG BASS

Q. Please state your name and business address.

A. My name is Greg Bass. My business address is 401 West A Street, Suite 500, San Diego, California 92101.

Q. By whom are you employed and in what capacity?

A. I am employed by Calpine Energy Solutions, LLC in the role of Western Regulatory and Legislative Director.

Q. On whose behalf are you testifying in this phase of the proceeding?

A. I am testifying on behalf of Calpine Energy Solutions, LLC ("Calpine Solutions").

Q. Please describe your professional experience and qualifications.

A. I have over 25 years of professional experience in utility and restructured energy markets regulation. For seven years, I worked for PacifiCorp in Portland, Oregon in their Regulatory Affairs department. Thereafter, I worked for Southern California Edison in Los Angeles, California in their Regulatory Affairs department. Since 2000, I have worked in the San Diego, California office of the company that is now called Calpine Solutions and was formerly named Sempra Energy Solutions LLC and Noble Americas Energy Solutions LLC.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony responds to the reply testimony of PGE witnesses Brett Sims and Jay Tinker regarding the services that Calpine Solutions provides to its customers.

I will provide the Public Utility Commission of Oregon ("Commission" or "OPUC") with additional background regarding Calpine Solutions and its practices in response to PGE's testimony.

Q. Please provide an overview of Calpine Solutions' business and its operations in Oregon.

A. Calpine Solutions is a retail affiliate of Calpine Corporation ("Calpine"). Calpine is America's largest generator of electricity from natural gas and geothermal resources with operations in competitive power markets. Calpine's fleet of 78 power plants in operation or under construction represents nearly 26,000 megawatts of generation capacity. Calpine also provides retail energy services through its businesses Calpine Solutions and Champion Energy. Through wholesale power operations, Calpine serves customers in 23 states, Canada and Mexico.

Calpine Solutions is one of the largest retail providers in the United States, serving commercial, industrial and institutional customers in states that have restructured energy markets. Calpine Solutions has been serving retail customers in Oregon for 15 years – ever since 2004. Calpine Solutions currently serves approximately 200 megawatts of customer load behind Portland General Electric Company ("PGE"), representing 33 customers and 278 service sites.

Calpine Solutions' customers operate in industries that represent the backbone of Oregon's economy: hospitals, universities, manufacturers, high technology companies, and retail companies. These customers are sophisticated energy buyers that want control of the energy procurement and costs and have the wherewithal to assess the risks associated with their options.

Q. PGE's witnesses assert that Calpine Solutions' "current operations do not support PGE's or the region's resource adequacy needs."[1] How do you respond?

A. I think the witnesses' assertion rests on their definition of the "region's resource adequacy needs." As described in Calpine Solutions Response to PGE's Data Request No. 03 (PGE/206), Calpine Solutions relies on firm liquidated damage ("firm LD") contracts executed well in advance of the delivery month. Firm LD contracts for power include a stipulated damages provision that applies to failure to deliver or receive power. Firm service may be curtailed within mutually agreed to recall times, due to force majeure, or to meet balancing authority/utility or statutory obligations. If the seller interrupts, it will pay damages consistent with the terms of the contract, which is usually a proxy replacement price for energy for that hour(s).

Although Oregon does not have resource adequacy requirements, the California Independent System Operator ("CAISO") has adopted such requirements and it specifically allows the use of firm LD contracts, where power is sourced from balancing authorities outside the CAISO, as qualifying as a resource adequacy capacity product for compliance with both the CAISO's resource adequacy program and the California Public Utilities Commission's

[1] PGE/200, Sims-Tinker/21:15-16.

resource adequacy program[2]. Applying that same logic here, Calpine Solutions asserts that it is contributing to the balancing authority's capacity needs of PGE when Calpine Solutions provides power sourced from outside the PGE balancing authority using a firm LD contract. With that said, PGE does not identify any Commission rule or law that Calpine Solutions has violated by operating in such a manner.

Additionally, current studies of the Pacific Northwest indicate that as renewable generation is added over the upcoming years to the power pool and existing fossil fuel generation is retired, that the "region's resource adequacy needs" will increase in order to support the current levels of reliability to which we all have become accustom and is required for a modern society. Calpine Solutions believes that responding to this future capacity need can be accomplished by the Commission relying upon both the traditional vertically integrated utility model as the balancing authority as well as from the competitive energy markets through direct access.

Q. Do any other states where Calpine Solutions operates have resource adequacy requirements for a direct access program?

A. Calpine Solutions has a capacity obligation in all of the States in which it operates[3] with the exception of Texas, Oregon and Arizona. When Texas restructured their energy markets, the Public Utility Commission, over time,

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[2] CAISO Tariff, Section 40.4, available at http://www.caiso.com/Documents/ConformedTariff-asof-Jul1-2019.pdf; Cal Pub. Util. Commission Rulemaking No. 17-09-020.
[3] California, Connecticut, Delaware, District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, and Virginia.

specifically adopted a scarcity pricing mechanism in its calculation of the hourly prices for electricity to account for capacity scarcity.

I think what is important for the Commission to consider is that resource adequacy and the associated capacity products have many different facets. Depending on the facet needing to be addressed, it may be a product that is best suited for the balancing authority/utility to procure and provide to all customers, both cost-of-service and direct access under a cost-of-service revenue model, or it may be a product that the competitive energy markets can provide and, therefore, direct access customers would procure their resource adequacy obligation from the competitive energy markets.

Q. PGE suggests that Calpine Solutions is not providing any "service" to its customers.[4] Do you agree?

A. Since I do not know exactly what PGE's witnesses are defining as "service", I cannot specifically address the assertion. However, I seriously doubt my company would have been in business since 1998 and grown to serve approximately 1,500 commercial, industrial and institutional customers representing over 145,000 service meters nationwide if Calpine Solutions did not provide value to our customers.

As the Commission is fully aware, Calpine Solutions is an Electric Service Supplier ("ESS") in Oregon, but I am often asked by policy makers what is an ESS? Calpine Solutions' business model is extremely simple; we buy wholesale and sell retail. Calpine Solutions provides end-use customers direct access to the

[4] PGE/200, Sims-Tinker/21:16-18.

wholesale power markets. We are the umbilical cord between the end-user of electricity and the power generator. In so doing, we take on certain risks, such as credit risk, regulatory risk and procurement risk. We also have to add value to a commodity product in order to maintain and increase levels of customer satisfaction and to differentiate ourselves from our competitors. Some of the ways we add value are by offering customer tailored source-to-sink renewable energy products, market price risk and customer service account-level analysis and reporting tools, as well as Calpine Solutions' billing system provides our customers with in-depth transparency of usage and charge details, to the hourly level. I might also add that Calpine Solutions is an ISO 9001:2015 Certified Energy Services Provider, continually striving to improve quality management and customer service.[5]

Q. Could end-use customers bypass Calpine Solutions' services and buy their electricity directly from the wholesale power markets if that were allowed by law?

A. Yes, sophisticated customers could bypass the electricity service supplier, and some of our customer have done so in other regions. For example, Walmart and the University of California school system elected to set themselves up as an ESS equivalent in their states and manage the functions and risks associated with being an ESS themselves. However, this is an exceedingly rare development because the required business systems and intellectual capacity that is required to become

[5] ISO 9001:2015 is an international quality management standard certified by the International Organization for Standardization.

a successful ESS takes time and resources to acquire. Almost all end-use customers prefer to focus on their business mission (e.g. education, health care, and manufacturing) than to establish themselves as an ESS.

Q. PGE further alleges that Calpine Solutions stated that in response to PGE's Data Request No. 06 that "as of January 1, 2018 it held no long-term power supply agreements."[6] Is that a complete characterization of the information that Calpine Solutions supplied to PGE?

A. No. The referenced data request is attached as an exhibit to PGE's testimony (PGE/204). PGE asked Calpine Solutions to "identify all resource supply agreements in effect as of January 1, 2018 *with a contract term of five years or greater*."[7] Calpine Solutions indicated it did not have any power supply agreements in effect as of January 1, 2018 with a term of greater than five years. However, Calpine Solutions also informed PGE, in a confidential response to its Data Request No. 07, that its current practice is to regularly purchase power up to [redacted] years or more in advance of the delivery date if the customer so chooses to secure its supply that far in advance and we have sufficient quantities to transact a wholesale purchase efficiently. We also explained:

[redacted]

[6] PGE/200, Sims-Tinker/22:16-17.
[7] PGE/206, Sims-Tinker/1 (emphasis added).

[redacted].

I believe our business practices are responsive to customer demand and the conditions in the Northwest market at this time. If the Commission determines that longer-term power-supply arrangements are a policy priority, as the California legislature has made with renewable energy procurement, Calpine Solutions will comply with such regulatory obligations.

Q. If a customer wished to secure a supply for five years or more in advance or from a specified resource or resource type, would Calpine Solutions attempt to meet the customer's wishes by procuring such supply?

A. Of course. As a matter of fact, when market conditions signal that longer-term energy contracts [redacted] are as good a value as shorter term arrangements, Calpine Solutions communicates these market opportunities to our Oregon customers.

Q. PGE suggests that liquidated damages contracts are not adequate to secure supply.[8] How do you respond?

A. In regards to PGE's implication that firm LD contracts are in some way less reliable than direct control of a physical asset, I reviewed our 2018 scheduled firm LD energy deliveries versus actual energy deliveries, and out of 8,760 hours of energy deliveries our firm LD contracts were only reduced and not resupplied for 11 hours (0.13% of the hours in a year). Of those 11 cut hours, the majority of the cut hours were less than 10 megawatts out of [redacted]

[8] PGE/200, Sims-Tinker/23:6-15.

delivered, with the one single largest cut occurring on Sunday, December 23rd when 21 MWs was cut for one hour at 2:00 pm, which is unlikely to be a reliability issue. These kinds of delivery statistics demonstrate that Calpine Solutions' use of firm LD contracts is unlikely to be an impending source of reliability issues for PGE.

Q. PGE also criticizes Calpine Solutions for purchasing power on an on-peak and off-peak block basis, which can cause scheduling imbalances on the shoulder hours. How do you respond?

A. This is standard practice in the non-RTO states where there are no organized day-ahead and real-time hourly markets, only bilateral arrangements. I would add that now would be a good opportunity for me to advocate that PGE join a regional transmission organization, such as the CAISO, which would allow for competitive supply of hourly and day-ahead retail power supply and reduced imbalances on the shoulder hours, among other benefits. However, I am fully aware of the policy implications at the state level that are currently discouraging pursuit of this outcome.

I would also note that, even where there is a robust bilateral market for hourly imbalance power from sources other than the balancing authority, it is difficult for an ESS to forecast hourly variations in customer load on a short-term basis; for example, customers do not necessarily communicate when they add or reduce their electricity consumption in a timely manner to Calpine Solutions' scheduling desk, and Calpine Solutions does not have real-time access to PGE's interval metering at the customer's site.

Additionally, it is important to note that before joining the Energy Imbalance Market, PGE's OATT Schedule 4-R contained an increased imbalance price for deliveries that fell outside of bands of scheduling accuracy. With respect to direct access service under Schedule 4-R, PGE utilized a 10-percent pricing increase for imbalances exceeding a 7.5-percent deviation band.[9] The existence of such a band suggests that there will be hours where the scheduled delivery by an ESS are expected to be outside even 7.5 percent of the load. Notably, due to the recognized difficulty of hourly scheduling of retail loads, PGE's deviation bands were more restrictive for transmission customers scheduling energy outside of the direct access context under Schedule 4, and included an initial band of five percent and a further pricing increase for exceeding a 25-percent deviation band.

Q. Could you provide an explanation of how the percentage of hours that fell outside of such a 7.5 percent band that formerly existed in Schedule 4-R in 2018?

A. Yes. In 2018, the percentage of hours of each month where Calpine Solutions' scheduled deliveries to PGE exceeded the negative 7.5 percent deviation band from customer actual metered usage were as follows:

[9] *See* FERC Docket No. OA07-15-000.

Month in 2018	Percentage of hours in which the negative 7.5% deviation band was exceeded
January	1.88%
February	0.45%
March	2.29%
April	4.86%
May	13.31%
June	7.64%
July	20.83%
August	8.87%
September	4.44%
October	1.48%
November	0.97%
December	0.54%

I do not believe that this table demonstrates an unreasonable level of imbalance deviations for scheduling to retail loads. Under the prior Schedule 4-R provisions, Calpine Solutions would have paid a 10-percent higher imbalance charge to PGE for such hours outside the 7.5% deviation band but I am not aware of any penalties or other violations that would have been found by FERC related to this type of scheduling. I note that PGE proposed to eliminate the imbalance deviation pricing bands when it adopted Energy Imbalance Market pricing for imbalance service, not Calpine Solutions or any other of the ESSs.

Q. PGE further asserts that Calpine Solutions uses its "financial hedge" purchased at the time of contracting with the customer as the schedule, presumably months and years later.[10] Is that an accurate characterization of Calpine Solutions' practices?

A. Not exactly. The financial hedge only comes into play for the volumes of electricity that the customer has elected to fix their price. Our power schedules include a forecast of all the customers' expected usage based on their historical usage with known changes identified by the customer divided into on-peak and off-peak quantities. Our billing team monitors customers' actual usage versus contracted usage as significant deviations materially impact the final price the customer receives from Calpine Solutions. Therefore, we are incented to try to keep contracted usage and actual usage aligned to help maintain customer satisfaction.

Q. Could you summarize Calpine Solutions' general response to PGE's concerns with respect to the RIC and the RAD charge?

A. Yes, direct access customers should pay PGE for services PGE provides on their behalf as determined by the Commission.

However, Calpine Solutions believes that RIC is a transmission-based cost that should be collected via PGE's OATT from ESSs, not from a customer's retail tariff rates approved by the OPUC as PGE has proposed.

Regarding RAD, this appears to Calpine Solutions to be a resource adequacy cost that PGE has not yet incurred and may never incur. However, the

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[10] PGE/200, Sims-Tinker/42:4-8.

policy associated with this proposal, reliability, is a policy imperative that requires a thorough record in order for the Commission to determine exactly what product and service RAD is indeed accomplishing and whether all, some or none of the RAD can be supplied by the ESSs.

Q. Does this conclude your testimony?

A. Yes.

Calpine Solutions Exhibit 300
Witness: Kevin C. Higgins

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

New Load Direct Access	)	
Portland General Electric Company	)	**Docket No. UE-358**

Cross Answering & Rebuttal Testimony of Kevin C. Higgins

on behalf of

Calpine Energy Solutions, LLC

August 21, 2019

CROSS ANSWERING & REBUTTAL TESTIMONY OF KEVIN C. HIGGINS

Introduction

Q. Please state your name and business address.

A. My name is Kevin C. Higgins. My business address is 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. Are you the same Kevin C. Higgins who previously filed Reply Testimony in this case on behalf of Calpine Energy Solutions, LLC ("Calpine Solutions")?

A. Yes, I am.

Q. What is the purpose of your Cross Answering & Rebuttal Testimony?

A. My Rebuttal Testimony responds to certain arguments raised by Portland General Electric ("PGE") in the Rebuttal Testimony filed by Brett Simms and Jay Tinker. My Cross Answering Testimony responds to certain arguments made by Citizen's Utility Board witness Bob Jenks and makes reference to the Reply Testimony of Staff witness Scott Gibbens and AWEC witness Brad Mullins pertaining to PGE's implementation of its New Load Direct Access ("NLDA") program.

Q. What are the primary recommendations in your Cross Answering & Rebuttal testimony?

A. I offer the following recommendations in my Cross Answering & Rebuttal Testimony:

- I continue to recommend that the Commission should reject both the Resource Adequacy ("RAD") Charge and the Resource Intermittency Charge ("RIC") proposed by PGE for NLDA customers. I reiterate that Calpine Solutions does not object to a thorough investigation in a generic docket of resource adequacy and capacity provided on behalf of NLDA customers (or direct access customers generally), but the investigation should include a close examination into the means by which ESSs can self-supply capacity rather than simply accepting the premise that this product can only be provided by PGE.
- I recommend that the NLDA program should not be held in abeyance while resource adequacy and capacity issues are investigated.
- If the Commission adopts an alternative in which the RIC and RAD charges are implemented simultaneously with an NLDA demand response program (as suggested by Staff as an alternative proposal), then:
    - The Commission should make clear that any adoption of the RIC and RAD charge is temporary while a more fulsome examination of resource adequacy and capacity is conducted, including a close examination into the means by which ESSs can self-supply capacity, as well as addressing PGE's energy imbalance concerns properly at the Federal Energy Regulatory Commission ("FERC").
    - The terms of the NLDA interruptions under such an arrangement should be clearly spelled out and should be limited to instances in which the ESS

or its agents fail to provide the necessary power supply to the NLDA customer above a material threshold; and

  - The agreement by an NLDA customer to participate in such a demand response arrangement should be accompanied by a credit to the participating customer that fully offsets the RIC and RAD charges while the generic investigation is being conducted.

- Calpine Solutions is willing to support an approach to pricing energy imbalance service that returns to the pre-EIM practice of applying pricing premiums at the individual ESS level for scheduling deviances that exceed a predetermined amount. Such a change should be implemented through PGE's FERC-jurisdictional OATT.
- I recommend that the Commission reject PGE's proposed Long-Term Energy Option as proposed, but allow that in the Daily Market Energy Option PGE can bilaterally procure the *RPS portion* (i.e., 20 percent) of the customers' supply, subject to limitations described to protect against the risks of special contracts. The non-RPS portion of the standard offer should be based on a daily market index price, and participation in the standard offer should not count towards the participation cap in the NLDA program.

Q. In your Reply Testimony, you also made recommendations pertaining to management of the queue and enrollment criteria. Have any of those recommendations changed?

A. No.

Response to PGE Regarding Its Proposed RIC and RAD Charge

Q. In your Reply Testimony you stated that Calpine does not object to a thorough investigation of resource adequacy and capacity provided on behalf of NLDA customers or direct access customers generally. How did PGE respond to this idea?

A. Staff and AWEC also proposed similar investigations. PGE indicated that the Company agrees with the scope of such an investigation as identified by the parties, subject to its NLDA program being held in abeyance pending the outcome of the investigation.[1]

Q. Do you agree that the NLDA program should be held in abeyance pending the outcome of the investigation?

A. No. Holding the program in abeyance would unduly delay the opening up of the NLDA program for prospective customers interested in investing in Oregon. I recommend that the NLDA program be implemented without the proposed RIC and RAD charge, just as PacifiCorp's NLDA program has been, while the investigation into resource adequacy and capacity is conducted in a generic proceeding such as UM 2024, which the Commission has just opened.

Q. If the Commission is not amenable to implementing the PGE NLDA program under those terms, should an alternative be considered?

A. In that case, the Commission should consider, on a temporary basis, the alternative recommendation suggested by Staff, in which the RIC and RAD charges would go into effect, but NLDA customers would have the option to

[1] PGE/200, Simms-Tinker/2.

offset these charges by agreeing to having their service interrupted under certain conditions.[2] PGE indicated the Company was open to such an approach.[3]

Q. Has PGE given any indication of how the Company would implement this alternative?

A. Yes. PGE suggests that NLDA customers could participate in the Nonresidential Demand Response Pilot Program pursuant to Schedule 26 of the Company's tariff, following small changes to that rate schedule. Schedule 26 provides a range of interruption options for participants, with the amount of monthly credit for participating varying based on maximum number of interruption events per season (20, 40 or 80) and advance notice required (10 minutes, 4 hours, or 18 hours). At one end of the spectrum (20 maximum events per season, 18-hour notice), the Schedule 26 credits of $4.02/kW-month in summer and $4.80/kW-month in winter would offset around half of the RAD charge, if it is set at $9.00/kW-month, PGE's preliminary estimate. At the other end of the spectrum (80 maximum events per season, 10-minute notice), the Schedule 26 credits of $9.12/kW-month in summer and $10.89/kW-month in winter would more than fully offset the indicative RAD charge.

Q. Do you think that NLDA customer participation in Schedule 26 as currently structured is the right vehicle to implement the alternative approach?

A. No. Schedule 26 is structured to credit participants for responding to PGE interruption events. However, the entire premise of the RAD proposal concerns

[2] Staff/100, Gibbens/18.
[3] PGE/200, Simms-Tinker/16.

something different – the adequacy of the NLDA customer's supply. Fully offsetting the RAD charge should not be contingent on an NLDA customer agreeing to being interrupted up to 80 times in a season based on PGE's needs in serving its cost-of-service load. Rather, it should be based on the NLDA customer's willingness to be interrupted whenever its own supply is materially deficient. Therefore, if the temporary alternative is adopted, it should be tailored specifically for NLDA load, either as a separate rate schedule or a special section of Schedule 26, subject to very specific conditions.

Q. Does PGE appear to be supportive of an NLDA-specific interruption program?

A. No. PGE appears to be resistant to an NLDA-specific interruption program.[4] However, I do not believe the Company's resistance is well founded. An NLDA-specific program is justified because one of the primary assertions raised by PGE in this case concerns the adequacy of NLDA's customers' supply – and the Company's justification for the RAD charge derives directly from that assertion. Therefore, it makes sense for an NLDA-specific interruption option to be designed to provide a full credit against PGE's proposed RIC and RAD charge in exchange for an NLDA customer agreeing to be interrupted when its supply is materially deficient.

Q. If a temporary interruption approach is adopted, what conditions should be placed on it?

[4] See PGE's Responses to Calpine Solutions Data Requests 28 and 29, included in Calpine Solutions/301.

A. First, the Commission should make very clear that any adoption of the RIC and RAD charges is temporary while a more fulsome examination of resource adequacy and capacity is conducted, including a close examination into the means by which ESSs can self-supply capacity, as well as addressing PGE's energy imbalance concerns properly at FERC. It should be clear that the primary purpose of such a temporary arrangement would be to avoid delaying NLDA customer projects and that the temporary arrangement does not prejudice the final determination as to whether PGE's concerns can be addressed only through the types of charges proposed by the Company.

Second, the terms of the NLDA interruptions should be clearly spelled out and should be limited to instances in which the ESS or its agents fail to provide the necessary power supply to the NLDA customer above a material threshold.

Third, the agreement by an NLDA customer to participate in such a demand response arrangement should be accompanied by a credit to the participating customer that fully offsets the RIC and RAD charges while the generic investigation is being conducted.

The conditions I have just described notwithstanding, I reiterate that I believe the preferable course of action here is simply to allow the NLDA program to go forward without the RIC or RAD charge while an investigation into resource adequacy and capacity is conducted in a separate docket.

Q. On page 36 of their Reply testimony, Mr. Sims and Mr. Tinker discuss the required premiums of 125% and 200% of load aggregation point ("LAP") price charges required by the California Independent System Operator

("CAISO") for significant under-scheduling. Do you wish to comment on this discussion?

A. Yes. This discussion occurs in the context of the proposed RIC and PGE's energy imbalance charge. PGE responds to AWEC's observation that to the extent that a transmission customer is persistently under- or over-scheduling, premium pricing already applies through the EIM to prevent customers from leaning on the transmission provider for imbalance service. AWEC witness Brad Mullins notes that the CAISO Tariff charges an EIM Entity (in this case, PGE) for significant under-scheduling, either at a rate of 125% or 200% of the LAP price, depending on the magnitude of the under-schedule.[5]

PGE responds that these charges apply only if the metered demand within an EIM Entity Balancing Authority Area exceeds the EIM Base Schedule of Supply submitted by the EIM Entity by more than 5% or 10%, depending on the charge level. PGE goes on to explain that in its case, the EIM Entity is the entire PGE Balancing Area Authority ("BAA") inclusive of direct access loads. PGE states that the applicable percentage deadband translates to approximately 100-250 MWa for PGE's average BAA load, or 180-400 MW for PGE's peak BAA load, encompassing all of the existing direct access under-scheduling and the current direct access program itself.[6]

The upshot of PGE's response on this point is that while the EIM contains provisions that discourage under- and over-scheduling, it does so at the aggregate

[5] AWEC/100, Mullins/15.
[6] PGE/200, Simms-Tinker/36.

BAA level, and does not differentiate among different economic actors within the BAA if the entire BAA is within the deadband. My understanding is that prior to PGE joining the EIM, the Company's OATT applied premiums for under- and over-scheduling that were applied at the individual ESS level. In joining the EIM, PGE voluntarily relinquished these more individualized pricing premiums applied to energy imbalances. Now PGE complains about the ramifications stemming from its decision. In the interest of resolving the issue, Calpine Solutions is willing to support an approach that returns to applying energy imbalance pricing premiums at the individual ESS level when actual load materially deviates from scheduled power, similar to PGE's pre-EIM scheduling bands. Such a change should be implemented through PGE's FERC-jurisdictional OATT. This is the proper venue for addressing whether or not PGE's energy imbalance charges are compensatory.

Q. On pages 33-34 of their Reply Testimony, Mr. Sims and Mr. Tinker assert that the proposed RIC and RAD charges will not result in double charging and are not duplicative. Are you persuaded?

A. No. In my Reply Testimony I argued that the RIC would be a duplicative charge if customers were also subject to PGE's proposed RAD charge because a customer that pays the RAD charge would already be funding significant amounts of "contingent" capacity. I fail to see how a customer that pays the RAD charge as PGE has proposed should also somehow be responsible for paying the RIC for capacity associated with negative energy imbalances. Staff and AWEC raised similar concerns.

PGE responds by arguing that the RIC and the RAD are fundamentally different capacity products. The Company further differentiates the two products by stating that the Company is not proposing to acquire capacity for the RIC, but rather to use the RIC as a mechanism to compensate cost-of-service customers for capacity that is being used to cover ESS under-scheduling events.

The fact that PGE intends for the RIC to serve as a cost allocation vehicle for existing capacity that was not built to serve NLDA load, but allegedly will be used on behalf of NLDA customers in providing imbalance service in the future, does not make it less of a double charge if a RAD charge (or requirement) is also adopted. For if a RAD charge or requirement is adopted for NLDA customers, then PGE's argument that capacity needed for imbalance service must necessarily rely on capacity built for cost-of-service customers falls apart. PGE tries to confound this obvious conclusion by contending that the RAD capacity it would acquire (and force NLDA customers to purchase) might not be sufficiently flexible to provide energy imbalance service.

The Commission should find PGE's explanation unacceptable. PGE operates an integrated system. If NLDA customers are required to purchase or provide RAD, the product should not be "color-coded" in such a fashion that allows PGE to deem NLDA customers to be relying *additionally* on cost-of-service-funded capacity when their ESS requires energy imbalance service.

Q. On page 26 of their Reply testimony, Mr. Sims and Mr. Tinker state that PGE disagrees with an option that would allow direct access customers to

contribute toward resource adequacy through ESS self-supply of capacity resources. What is your response to the Company's position?

A. PGE concedes that splitting capacity procurement responsibilities between PGE and ESSs is possible, but claims that such an approach is adverse to the public interest. PGE argues it is best suited to act as the provider of resource adequacy because it can support system wide resource adequacy at lower cost, use an effective combination of resources to support resource adequacy, has exclusive responsibility for reliability and control of the balancing authority, and is actively regulated under broad Commission authority.[7]

In essence, the Company offers an argument that electric power generation service should be performed by a regulated monopoly rather than through competitive providers. While PGE is entitled to its opinion, this issue appears to have already been decided by the Oregon legislature twenty years ago. Direct access is the law of the state. And it appears that PGE now wishes to "re-legislate" the outcome through the Commission.

<u>**Response to PGE Regarding the Long-Term Energy Option**</u>

Q. PGE's witnesses downplay the risks inherent with specialized product offerings that you outlined in your reply testimony with respect to the Long-Term Energy Option. Are you persuaded by PGE's response?

A. No. I stand by the position in my Reply Testimony with respect to the risks inherent in PGE's proposed Long-Term Energy Option.

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[7] PGE/200, Simms-Tinker/26-27.

Q. Has PGE made any points with which you agree on this issue?

A. Yes, there is one. The primary reason PGE puts forward for adoption of its Long-Term Energy Option is its assertion that there is no readily available index for RPS-compliant energy or renewable energy certificates ("RECs") which could be used in a standard offer similar to the market-price index used for energy. I agree with PGE's limited point that there is no index available for this purpose, but I disagree that the lack of an index for this purpose justifies a specialized contract offering for the customer's entire supply in a new Long-Term Energy Option.

Instead, I propose it would be reasonable to modify the Daily Market Energy Option to allow PGE to bilaterally procure the *RPS portion* (i.e., at present time 15 percent) of the customer's supply, subject to the following limitations to protect against the same special contract risks that I outlined in my Reply Testimony:

(1) The RPS resource is not owned or contracted by PGE, and is not marketed to the customer as consisting of power from any specific facility or resource;

(2) The RPS portion of the pricing cannot be fixed for a duration longer than the non-RPS indexed portion in the tariff or customer contract;

(3) PGE's contract with the RPS resource owner, as well as PGE's offering to the customer, should be subject to review by Staff and stakeholders to ensure that the arrangement does not take on the character of a special contract;

(4) PGE should be directed that it must revise the tariff to use an index and eliminate the bilateral procurement of the RPS-portion of supply at such time that an index for bundled and unbundled RECs develops in the Pacific Northwest (as is the case in some other regions).

I believe these are reasonable sideboards that prevent the use of a specialized product offering by the incumbent utility and are narrowly targeted to the problem PGE identified.

Q. Do you have any other changes to your recommendation with respect to the Daily Market Energy Option and the Long-Term Energy Option?

A. No. I maintain my position on the remaining points, including that participation in this Daily Market Energy Option should not contribute to the cap in the NLDA program. Instead, it should simply be offered as a default or emergency-type of service, and not a long-term alternative where PGE acts an electricity service supplier. The Commission should be careful not to allow this aspect of the direct access programs to be converted to another green tariff, which has its own rules and caps being examined under Docket No. UM 1953.

Response to PGE Regarding Management of the Queue and Participation Cap

Q. PGE has also responded to several issues with respect to the participation cap and management of the queue in the NLDA program. Do you have any response?

A. Nothing in PGE's testimony causes me to change my recommendations in my reply testimony on these issues. However, I would like to clarify one point.

In my opening testimony, I stated that I supported PGE's proposal to measure the individual customer's share of the program cap (of 119 aMW) by using the amount of load that would be served through the distribution facilities to which the customer had committed to construct in a distribution agreement, such as a minimum load agreement.[8] In PGE's reply testimony, however, PGE appears to suggest that it might rely on the "design" plans for distribution planning, as opposed to the binding distribution contract that commits the customer to build the facilities.[9] The design plans can change before the customer executes a binding agreement to fund the construction of the relevant distribution facilities. Therefore, I would like to clarify that the final Schedule 689 state that PGE will rely on the final, binding distribution agreement committing the customer to construct the distribution upgrades.

<u>Response to CUB</u>

Q. What was CUB's response to PGE's proposed RIC and RAD charge?

A. CUB supports the Company's proposals. Mr. Jenks asserts that there is a serious problem with western power markets. He states that these markets do not include the underlying cost of capacity which is required to develop the resources that are dispatched to the markets.[10] As a result, he argues that cost-of-service customers are subsidizing direct access service.[11]

Q. Do you agree with Mr. Jenks' contention that cost-of-service customers are subsidizing direct access service?

A. No. As PGE testified, once a customer switches to long-term direct access ("LTDA") service, the Company no longer plans to serve them. Therefore, PGE

[8] Calpine Solutions/100, Higgins/34-36.
[9] PGE/200, Sims-Tinker/52-54.
[10] CUB/100, Jenks/17.
[11] CUB/100, Jenks/3.

is not constructing or acquiring capacity to serve these customers. Moreover, departing LTDA customers continue to pay for PGE's fixed generation costs at cost-of-service rates for five years despite procuring their generation service in the wholesale market. Mr. Jenks notes that in the past several years Mid-C wholesale prices have been, on average, lower than they were between 2003-2008. This is an indication that LTDA customers are subject to greater price volatility than cost-of-service customers, which is one of the risks LTDA customers take when they switch to LTDA service. But in exchange for that greater volatility and price risk, it is not unreasonable for these customers to enjoy the benefits of lower market prices when wholesale prices are favorable.

Q. Mr. Jenks compares the wholesale market structure in the Northwest with other regions. Do you wish to comment?

A. Mr. Jenks correctly points out that, unlike the Northwest, other markets have developed Regional Transmission Organizations (RTOs), and along with them, organized markets that in certain cases support a market for capacity.[12] He also notes correctly that many other jurisdictions that implemented full direct access service required divestiture of utility generation from utility wires service.[13] Oregon has neither an RTO nor divestiture, and the wholesale market structure and regulatory business climate reflect those conditions, including ongoing resistance on the part of incumbent utilities to the full development of direct access service. ESSs in Oregon have had to adapt to a market structure that is

[12] CUB/100, Jenks/16.
[13] CUB/100, Jenks/17.

dominated by vertically-integrated utilities. This is not a structure the ESSs designed; rather is it one they have learned to coexist within. Since the Northwest region has not been characterized by capacity constraints, there has been little reason to develop resource adequacy requirements for LTDA service heretofore. However, to the extent that resource adequacy is a concern going forward, Calpine Solutions, as I have said, is willing to address those concerns in a generic docket that considers a range of possible solutions.

Q. Does this conclude your Cross Answer & Rebuttal testimony?

A. Yes, it does.

Docket No. UE 358

EXHIBIT

Calpine Solutions 301

PGE Responses to Data Requests Referenced in Cross Answering & Rebuttal Testimony

August 16, 2019

TO: Greg Adams
Calpine Energy Solutions, LLC

FROM: Karla Wenzel
Manager, Pricing & Tariffs

PORTLAND GENERAL ELECTRIC
UE 358
PGE Response to Calpine Energy Solutions, LLC's Data Request No. 028
Dated August 9, 2019

Request:

Reference PGE/200, Sims-Tinker/25, stating that PGE could make changes to Schedule 26 making direct access customers eligible to receive payments for load reduction that "would partially or fully offset" the RAD charge.

a. Explain whether PGE proposes to allow the direct access customer to completely offset the RAD charge and provide a description of the referenced load reduction commitment required for such complete offset.

b. Differentiate between the circumstances that would result in a partial offset of the RAD charge as distinct from a full offset of the RAD charge.

Response:

a. PGE's proposal would require that PGE plan for the capacity needs of direct access customers and if so directed, PGE would allow direct access customers to participate in Schedule 26, Nonresidential Demand Response Pilot Program, or other nonresidential customer committed firm load reduction demand response offering.

   Schedule 26 currently allows for participating customers to select a participation option, a maximum energy hour option, and an advanced-notice option. The elected options are associated with a range of payments.

   The ability for NLDA customers to fully offset the RAD charge through demand response is dependent on the approved RAD charge and the selected Schedule 26 performance options made by the NLDA customer.

b. Please see the response to a.

August 16, 2019

TO: Greg Adams
Calpine Energy Solutions, LLC

FROM: Karla Wenzel
Manager, Pricing & Tariffs

PORTLAND GENERAL ELECTRIC
UE 358
PGE Response to Calpine Energy Solutions, LLC's Data Request No. 029
Dated August 9, 2019

Request:

Reference PGE/200, Sims-Tinker/25, stating that PGE could make changes to Schedule 26 making direct access customers eligible to receive payments for load reduction. To the extent that a direct access customers' participation in Schedule 26 would not eliminate the RAD charge, please explain what operational impediments would preclude PGE from implementing a similar program tailored solely for direct access customers to eliminate the need for the RAD charge for such customers who elect to participate.

Response:

PGE objects to this question in so far as it is vague and calls for a legal conclusion. Without waiving this objection PGE response as follows:

PGE would not support an alternative direct access only demand response program with substantively different terms, requirements, and payments because there exists no characteristics unique to NLDA customer participation that are not accounted for in current program offerings under Schedule 26.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 21, 2019, I electronically filed redacted portions of the Rebuttal and Cross-Answering Testimony Calpine Energy Solutions, LLC with the Public Utility Commission of Oregon's Filing Center and served the confidential portions of the filing to the following qualified parties to Docket No. UE 358 via Priority US Mail, Two-Day Delivery:

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Dated: August 21, 2019

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