Portland General Electric Company
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October 04, 2019

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street SE, Suite 100
P.O. Box 1088
Salem, OR 97308-1088

Re: **UE 358 – PORTLAND GENERAL ELECTRIC COMPANY,** Advice No. 19-02, New Load Direct Access Program

Dear Filing Center:

Portland General Electric Company (PGE) submits the following response to the Administrative Law Judge's Bench Request issued September 20, 2019.

Please direct all formal correspondence, questions, or requests to the following email address: pge.opuc.filings@pgn.com.

Sincerely,

Jay Tinker

Jay Tinker
Director, Rates & Regulatory Affairs

Question No. 1

Is the sole justification for the proposed RAD the need to procure capacity to provide emergency service and keep the balancing authority (BA) in balance to avoid curtailment when market purchases are unavailable at any price? Or does PGE assert that, when market purchases are available, the current emergency service tariff fails to adequately recover costs such that new load direct access (NLDA) customers will be subsidized without the RAD?

a. *If the latter, please articulate the rationale with specificity.*

b. *If the former, please confirm that, if PGE were legally and operationally permitted to curtail NLDA load before cost-of-service load, such differential curtailment would eliminate the need for the RAD?*

Response:

a. If the latter, please articulate the rationale with specificity.

a. There is no sole justification. The basis for advancing the RAD is the following fundamental principles: the need to plan for all load given looming resource adequacy challenges, the need to then procure capacity to meet the reliability need, and finally fairness in customer contribution for costs incurred for shared customer benefit. The justification for the RAD is not limited to emergency service.[1] While the RAD does provide capacity that can be instrumental in an emergency, the purpose of the RAD is to ensure resource adequacy for *all* customers at *all* times—this includes peak load events and events of insufficient supply. To achieve resource adequacy, capacity must be planned for, procured, and made available to the system. In this sense, RAD related capacity resources are needed to meet capacity needs under a broad range of peak demand and contingency conditions, as well as to prevent emergency service conditions.

Capacity is essential to the power system and it is not a product that can be acquired in pre-determined hours or on a "just in time" basis when the specific need is unanticipated and therefore cannot be known in advance. Capacity provides value to the system and customers by being available during sudden, unanticipated events including weather variations, and resource outages. The presence of capacity resources allows, as reflected on a planning basis, to reduce expected loss of load conditions to acceptable limits.

As the availability of regional supply resources diminishes due to increasing resource retirements and changing operating constraints, this Commission must now consider whether to allow new large single loads to be unplanned-for while those loads benefit from system

[1] PGE is not proposing changes to its Schedule 81 (Non-Residential Emergency Default Service) which provides a market-based energy product should a DA customer's ESS default, necessitating emergency service.

capacity paid for by cost-of-service customers. The combination of changing regional power supply conditions and new large, unplanned-for loads necessitate action to ensure resource adequacy, prevent shifting of supply and reliability risk, and achieve fairness in cost contribution. A reliable electric service system is a cornerstone of our modern society and it should be supported by transparent resource planning and provided in a fair, just and reasonable manner. Allowing one class of customers to benefit from free-ridership while all other customers bear the associated costs is unfair and undermines the reliability of the electric system.

b. Please see response to part a above and question 3 below.

Question No. 2

What is PGE's capacity procurement plan?

a. *When would PGE act to procure capacity?*

b. *Would PGE consider all capacity products? (e.g., new physical, existing bilateral, demand response, distributed emergency dispatch, etc.)*

c. *What duration of capacity product would PGE consider?*

d. *When would NLDA customers be charged for capacity products?*

e. *Assuming the Commission approved the RAD as an interim measure, but continued investigation to determine the appropriate level of charges and alternatives to the RAD, how would any charges collected in an interim period be used?*

Response:

Effective capacity procurement depends on the ability to plan for resource requirements to meet customer reliability needs and identify the best measures to meet those needs. PGE has well-established integrated resource planning (IRP) and resource acquisition processes for long-term planning, need identification, and procurement that use robust analyses and allow for appropriate oversight. Upon approval, the Company would work to integrate NLDA capacity needs into existing IRP and procurement processes and methodologies. However, it is not appropriate to wait for the next full IRP cycle to implement such changes. Instead, in the near-term PGE would use the sensitivity analyses in the 2019 IRP and potentially the 2020 IRP update to convey updated estimates. PGE would also refresh capacity needs analyses, as needed, to ensure updated forecasts support procurement. PGE expects that in the interim period, the Company would acquire medium-term structured capacity products via bilateral procurement options.

a. When would PGE act to procure capacity?

As part of this docket, PGE is requesting that the Commission provide "explicit direction that IRP Guideline #9 applies to energy load-resource balance for customer loads that are committed to energy service by an alternative electricity supplier, but that it does not apply to resource adequacy because alternative electricity suppliers do not provide a reliability service."[2,3] This change would allow the Company to conduct long-term planning for capacity needs of the entire system, rather than just cost-of-service customers.

If the Commission were to provide the necessary direction regarding IRP Guideline #9 and allow PGE to plan for resource adequacy of NLDA loads, the Company would first update its capacity need assessment with the most current information and forecasts of queued NLDA load. PGE

[2] IRP Guideline #9 states "An electric utility's load-resource balance should exclude customer loads that are effectively committed to service by an alternative electricity supplier." *See* UM 1056 Order No. 07-002, Page 19
[3] PGE/100 Sims – Tinker/7

would then begin the procurement process to secure the necessary capacity to address the identified shortfall. Given the status of the NLDA queue, customer construction cycles, and regulatory process timelines, PGE estimates that the capacity would need to be secured and available starting in 2021; this estimate would benefit, however, from more information and analysis regarding the timing of the queued and eligible loads.

Within PGE's 2019 IRP, in Section 4.7.3, the Company conducted sensitivity analyses detailing the incremental capacity need associated with full participation in both the existing Long-Term Direct Access and NLDA programs, which are not included in the Company's long-term cost-of-service capacity planning. This capacity need is incremental to PGE's cost-of-service capacity needs identified in Section 4.3.2. As indicated in the 2019 IRP Action Plan[4],with regard to cost-of-service capacity needs, PGE plans to pursue cost-competitive agreements for existing capacity in the region to meet a portion of our capacity needs starting as early as 2021 and increasing in 2024 and 2025. PGE is currently soliciting offers from regional entities to identify and evaluate existing capacity in the region, recognizing that PGE's cost-of-service need may begin as early as 2021 as shown in the reference case assessment.

b. Would PGE consider all capacity products? (e.g., new physical, existing bilateral, demand response, distributed emergency dispatch, etc.)

Yes. As stated in our testimony, PGE is open to and will evaluate capacity supply procurement, demand response, and distributed generation alternatives so long as these products are designed in a manner that ensures appropriate responsiveness to system capacity and reliability needs, and complies with PGE's regulatory requirements under FERC, NERC, and the Commission. We believe that products such as demand response and distributed resources are increasingly important tools to support resource adequacy, but are most effective when coordinated with other resources through an integrated system reliability framework.

PGE's evaluation and procurement frameworks are sufficiently flexible to determine the capacity contribution of these options assuming the parameters and requirements of each option (e.g., notice, performance duration, magnitude, etc.) are known. PGE expects that in the interim period, the Company would procure medium-term structured capacity products bilaterally until changes to the long-term planning and procurement process were fully implemented. See PGE's answer to part c below. PGE notes that forward purchases in the wholesale energy market do not convey capacity rights from seller to purchaser, nor do such transactions require that the energy supply source include specific capacity or flexibility attributes.

c. What duration of capacity product would PGE consider?

PGE would evaluate all durations of capacity products and associated ability to meet system needs. However, should the Commission direct PGE to support resource adequacy on an interim basis while performing its broader investigation in Docket No. UM 2024, PGE would seek to secure medium-term capacity resources, which may include various products—contracts,

[4] Summarized in Section ES.6 of the 2019 IRP

demand response, and distributed resources. These medium-term resources will come from specified sources or systems with declared physical resources providing capacity capability and not from wholesale energy-only purchases.

d. When would NLDA customers be charged for capacity products?

PGE has proposed to calculate and make effective the RAD in our next general rate case (GRC). While this is a longer period than desired, PGE recognizes that a GRC is the most appropriate setting to forecast and fairly allocate costs in a holistic way for all customers. In a GRC, the Company would provide a proposal that sub-functionalizes production costs, inclusive of any procured incremental capacity, into costs associated with resource adequacy. PGE would then use this functionalized amount and apply existing rate spread and rate design practices to derive a retail resource adequacy price applicable to cost-of-service customers classes and rate schedules, in addition to NLDA. The Company has not identified an explicit date for filing its next GRC; however, it is reasonable to assume that we would target a test year as early as 2021 given growing capacity needs. Any target date is likely to be informed by the timing of capacity needs, online dates for new unplanned for loads, and resource procurement timing (e.g., resource acquisition or program development).

Given the above detailed approach to functionalizing resource adequacy costs, PGE would not directly assign incremental capacity costs to NLDA customers for specific capacity products. The overall system, rather than a specific resource, provides resource adequacy to all customers and it would be inappropriate to directly assign incremental costs to one class of customer.

e. Assuming the Commission approved the RAD as an interim measure, but continued investigation to determine the appropriate level of charges and alternatives to the RAD, how would any charges collected in an interim period be used?

As proposed, the RAD is intended to fairly distribute and recover costs necessary to provide resource adequacy to NLDA customers, which will be provided by PGE's existing resources and incremental resources. PGE believes the appropriate long-term path is to file the RAD change in our next GRC and if approved, the Company would collect the costs associated with resource adequacy for cost-of-service and NLDA customers as a functionalized component of its total revenue requirement. If the Commission directed PGE to plan for the NLDA load and approved the RAD as an interim measure, PGE would explore alternative mechanisms such as a regulatory deferral of the incremental costs or the Annual Update Tariff to ensure that the cost burden is not increasingly borne by cost-of-service customers. In both the interim period (after a PUC order and before a GRC) and long-term, the revenues received from the RAD would be an offset to prudently incurred resource adequacy related costs.

Question No. 3

Is a differential curtailment protocol for NLDA customers, even if operationally viable (e.g., because interconnection equipment and voltage levels are appropriate), nonetheless not possible without changes to PGE's Rule N Curtailment Plan and/or other legal, regulatory or tariff requirements to maintain a non-discriminatory approach to load curtailment?

a. If such a protocol is not possible, please identify all relevant legal and regulatory barriers.

b. If such a protocol is possible, please describe a differential curtailment protocol and procedure that PGE would have authority to implement.

Response:

a. If such a protocol is not possible, please identify all relevant legal and regulatory barriers.

PGE currently operates within a legal and regulatory framework that does not allow for discriminatory load curtailment based upon customer class. The legal and regulatory framework is reflected in PGE's current tariff with two rules relating to curtailment protocols: Rule N and Rule C. Rule N governs curtailment protocols for PGE given a declared regional or state emergency activated by State authorities.[5] Rule C governs the conditions under which PGE may engage in emergency curtailments at its discretion. The rules are developed in accordance with Oregon law and rules.

Oregon laws and rules set forth a non-discriminatory regulatory approach that does not allow different curtailment treatment for NLDA customers. ORS 757.622 requires that the Commission establish the terms and conditions for direct access customers to receive service under an emergency. OAR 860-038-0280 requires that utilities file tariffs that allow for the provision of emergency service to direct access customers as soon as an ESS is no longer providing service. PGE may curtail electric service to customers in an emergency, and consistent with Rule C, Order No. 01-777, ORS 757.325, and OAR 860-038-0560 PGE is required to implement curtailments on a "non-discriminatory" basis. These requirements preclude PGE from self-selecting or prioritizing who is curtailed and under what circumstances customers are curtailed and requires that PGE serve as the provider of last resort (POLR).[6,7] Additionally, Rule C is specific to emergency situations, rather than inadequate customer supply or peak events. This distinction is important because PGE alone ensures reliability within its service territory and has the obligation to use its resources for the benefit of the entire system, regardless of customers' energy supply choices.

Even if PGE had the authority to curtail loads on a discriminatory basis, it is not appropriate to rely on emergency curtailment measures as a primary system reliability solution. Electricity is a

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[5] See PGE's Rule N,

[6] Order No. 01-777, Entered Aug 31, 2001, At Pages 38 -39.

[7] PGE/100, Sims – Tinker/15

fundamental and essential service to the functioning of modern society. The sudden and unplanned loss of electricity service can impact the safety and well-being of our customers and communities. It is inappropriate to plan on the intentional curtailment of a customer class particularly when the damaging effects of lost load can be avoided through prudent planning, procurement and a fair allocation of resource adequacy costs, so all customers contribute to and share in the benefits of reliable service.

As we detail in our testimony and our response to item number four below, PGE recognizes that some customers may be willing to accept conditionally interrupted service. The most effective and appropriate approach to allow customers to choose interruptible service is through a demand response program.

b. If such a protocol is possible, please describe a differential curtailment protocol and procedure that PGE would have authority to implement.

See response to part a.

Question No. 4

How would PGE design a demand response or curtailment program for NLDA customers that is specifically tailored to the problems or specific events that PGE seeks to address through the RAD?

a. *Would a demand response or curtailment requirement, with conditions similar to the program proposed by Calpine Energy Solutions, LLC (Calpine) in Calpine/300, Higgins/2-3, address the resource adequacy events that the RAD is intended to address?*

b. *When would PGE be prepared to propose a custom demand response or curtailment solution tailored to the specific events the RAD is intended to address?*

c. *What parameters would such a custom program require?*

Response:

a. Would a demand response or curtailment requirement, with conditions similar to the program proposed by Calpine Energy Solutions, LLC (Calpine) in Calpine/300, Higgins/2-3, address the resource adequacy events that the RAD is intended to address?

No. Calpine's proposed demand response program would not address all resource adequacy needs that the RAD is intended to address. Its proposal is deficient in many ways. PGE discusses its response to Calpine's proposal below.

Demand response can serve an important role to support resource adequacy including the needs of direct access customers. However, limiting a demand response program design as Calpine suggests would severely undermine the program's ability to support reliability, and would discriminate against participants in PGE's existing demand response program.

In testimony, PGE has identified how to capture the significant benefits of demand response on premises of direct access customers. Deploying demand response programs at such facilities can enable the power system to operate reliably and at lower cost through the avoidance of new supply-side capacity resources. In the near future, those same loads will be enabled to do more within an integrated grid – flexible loads will have important functions for integrating renewable resources and satisfying operational reserve requirements. Upon Commission direction, direct access customers could participate in demand response through Schedule 26 or similarly designed Schedule. PGE proposes altering Schedule 26, or filing a parallel Schedule, that allows NLDA customers to participate in the program. PGE discusses this approach in greater detail in part c of this response.

Calpine's proposed NLDA DR program would not support all resource adequacy events that the RAD is meant to address for several reasons. Broadly, Calpine's proposal would not support resource adequacy because the proposed program is not actionable or practicable. Moreover, Calpine's proposal would not effectively support resource adequacy and reliability as it would allow for customers to opt-out of demand response under any event of the customer's choosing.

Additionally, Calpine's proposal does not broadly support the resource adequacy need that the RAD is intended to address because it narrowly limits the system conditions in which the demand response resource can be called upon.

Calpine's proposed NDLA DR program would not allow adequate time for PGE to call on the program when contingency conditions are encountered. As proposed, PGE could only rely on the program during an under-delivery event; however, PGE is unable to compare actual loads to schedules until well after the operational hour. In practice, the load forecast and scheduled energy delivery are the same for a direct access customer until after the hour. For this reason, it is simply not feasible to measure whether an ESS has adequately delivered before notifying a customer of a demand response event. Once PGE determines an ESS delivery is below a material threshold, the needed demand response event has already passed.

The proposed Calpine program is silent on the number of events that can be called per year and the customer notification period required for PGE to call an event. Calpine's proposal simply suggests that the program may be called when an ESS fails to deliver by a material threshold. Since there are no limits in the number of hours under-delivery can occur, there would correspondingly be no limit on the number of load reduction events for these customers. For example, between 2012 and 2018 ESS loads were 10% under-scheduled on average more than 300 times per year. In 2012, ESS loads were similarly under-scheduled 860 hours or 9.8% of all the hours in the year. This frequency far exceeds the limits on load reduction event hours in Schedule 26 (80 event hours maximum per season) and it is unreasonable to expect NLDA customers to participate in load reduction actions so often.

Calpine's proposal would not effectively support resource adequacy as it does not account for customers opting-out of participation in an event. PGE's non-residential demand response program allows customers to opt-out of demand response events that are called under conditions that cannot be accommodated by facility operations. Such features are generally required to enable customers to participate in demand response programs. Under Calpine's NLDA DR proposal, customers would presumably remain able to opt-out of events. Should an ESS fail to deliver, and a customer elect to opt-out of a demand reduction event, PGE would be unable to make use of the demand response capacity and may be required to curtail service on a non-discriminatory basis.

Calpine's proposal would not effectively support the resource adequacy needs that the RAD is intended to address as it limits the system conditions under which demand response can be called upon. Achieving resource adequacy metrics requires a portfolio of capacity resources to support system needs under a wide range of conditions. The RAD is designed to fairly allocate the costs and benefits of resource adequacy for all customers whereas Calpine's proposal would only support capacity needs of NLDA customers in very limited circumstances, if at all. Resource adequacy requires a portfolio of capacity resources to meet shared reliability goals – it would be undermined by Calpine's proposed program in which the capacity resource is only available to a subset of customers or is completely inoperable. The public interest is best served when all available resources are available to be deployed to prevent loss of electrical service.

Lastly, PGE does not support creating a NLDA-specific tariff with substantially different terms and conditions than are available to cost-of-service customers. Calpine's proposal would likely create a program with advantageous terms and conditions for NLDA customers, including higher incentive payments arbitrarily set to offset the RAD. Advantageous NLDA demand response terms and conditions would be discriminatory to cost-of-service customers and would clearly shift costs to cost-of-service customers.

b. When would PGE be prepared to propose a custom demand response or curtailment solution tailored to the specific events the RAD is intended to address?

PGE would be prepared to file an updated demand response tariff, Q2 2020. This filing could occur soon after a decision in this docket and would be expected to be approved prior to the conclusion of the construction activities associated with queued NLDA customers.

c. What parameters would such a custom program require?

PGE's proposed demand response program that would allow for direct access load participation must reflect the central design of PGE's existing non-residential demand response program -- Schedule 26. PGE proposes to alter Schedule 26 to allow direct access load participation since Schedule 26 currently allows for non-residential cost-of-service customers only. Alternatively, PGE could file a separate but parallel schedule that retains the central design elements of Schedule 26 but would be specific for direct access loads.

PGE would adjust Schedule 26, or a parallel Schedule, to allow continuous program participation. As reflected in Schedule 26, PGE's demand response pilot is expected to conclude in September 2020. PGE intends to extend the availability of this program and would propose that all non-residential demand response customers, including NLDA customers if the Commission directed PGE to plan for the reliability for these customers and they were to incur their fair share of its costs, be served on Schedule 26 following a tariff update. The clear benefit of this approach is to ensure that cost-of-service and direct access customers are entitled to the same program benefits. In the alternative and upon Commission direction, PGE would be willing to have a parallel schedule with the same customer participation terms and conditions presently available in Schedule 26 that would persist for NLDA customers until the conclusion of the Commission's general investigation into direct access policy.

PGE's demand response tariff would not include Calpine's proposed demand response program parameters for the reasons listed in part a of this response. Instead PGE would retain the central design elements of Schedule 26 which allow customers to choose from a range of maximum event hours per season and a range of notification windows. This approach benefits from avoiding any cost shifting or discriminatory outcomes associated with alternative terms and conditions available exclusively for direct access customers.

Question No. 5

PGE's RAD proposal would require all NLDA customers to pay the cost of capacity to match 100 percent of monthly peak demand. That capacity requirement is justified primarily by reference to extreme conditions of zero forward capacity contribution by ESS supply combined with a regional market shortfall, and the capacity procured through the RAD is not asserted to be used to benefit NLDA customers at other times.

a. Does PGE's RAD solution assume ESS non-performance during 100 percent of peak demand events?

b. Please address the characterization at Calpine/100, Higgins/7 of the RAD as "a very expensive 'insurance policy.'"

c. If the Commission were to accept Calpine's characterization of the RAD as an "insurance policy," for purposes of adopting an interim measure, please address whether it would be more reasonable to calculate the RAD based on a lower percentage of an NLDA customer's peak load, such as the percentage associated with a commonly used planning reserve margin (like the 16 percent used in the 2019 PNUCC Northwest Regional Forecast).

Response:

a. Does PGE's RAD solution assume ESS non-performance during 100 percent of peak demand events?

PGE's RAD proposal does not require NLDA customers to pay the cost of capacity to match 100% of their monthly peak demand. Rather, monthly peak demand is the determinant by which the RAD will be allocated to NLDA customers. The quantity of annual capacity need associated with NLDA loads is calculated by using PGE's IRP capacity planning models and will differ from monthly peak demands.

As discussed in response to question No. 1, resource adequacy is evaluated well ahead of a specific event and provides benefits outside of emergency conditions. As the balancing authority, PGE has sole responsibility for ensuring safe and reliable electric service. Commission guidelines and rules currently prevent PGE from planning for the capacity needs to ensure reliable service for all customers, including NLDA, but this does not relieve PGE of its obligations to serve as the sole reliability provider for its entire system.

PGE's RAD proposal does not assume ESS non-performance for all peak events, but instead recognizes that forward purchases in the wholesale energy markets are generally short-term products from unspecified sources. Instead, PGE's RAD proposal recognizes that safe and reliable electric service requires robust planning and procurement with transparency and proper oversight that must be provided for all system loads. NLDA customers and their suppliers have no obligation to plan for or secure capacity to achieve these outcomes. Instead, they are able to use financial instruments to provide price assurance, and eventually make offsetting wholesale market energy purchases, leaving cost-of-service customers paying for the capacity to ensure a reliable electric system. These financial instruments and short-term wholesale energy market purchases from unspecified sources are not replacements for physical capacity and resource adequacy planning.

b. Please address the characterization at Calpine/100, Higgins/7 of the RAD as "a very expensive 'insurance policy.'"

Calpine mischaracterizes the intent and the application of the RAD in its testimony,

> "...the RAD charge was conceived to be a very expensive "insurance policy" in which NLDA customers would be required to purchase in advance from PGE the capacity the NLDA customer would need if the customer were to switch from direct access service to Company supply service at some point in the future."[8]

First, the RAD is not a mechanism to ensure capacity is available should a customer need to switch from direct access to company supply under a default service scenario. Rather, the RAD is a mechanism to ensure resource adequacy and supply reliability for all customers with fair allocation of benefit and cost. As PGE has detailed in its testimony, data request responses, and in this response, PGE is the entity charged with ensuring system reliability. A customer electing to take direct access for their energy supply does not relieve PGE of its responsibilities and as demonstrated in the record of this docket, supply practices under direct access do not provide resource adequacy. As thermal resources across the region continue to retire and decommission and new, unplanned for, large loads begin to come online, this lack of resource adequacy is expected to significantly decline, endangering system reliability and unfairly shifting costs and risks to cost-of-service customers. The intent of the RAD is to address this issue.

Second, the RAD was not conceived as a "very expensive 'insurance policy'", but rather a fair and reasonable way to ensure that all customers pay for the services they are receiving. However, Calpine is correct on one aspect: the RAD does provide insurance as well as assurance. The RAD provides assurance that load will be served under a wide-ranging set of conditions based on a robust analysis that considers contingencies such as forced outages, extreme weather events, different renewable output levels, and diversity of loads and generation. The RAD also provides insurance that when the short-term wholesale energy market, which is a biproduct of dwindling surplus capacity, is unable to provide enough energy there will be capacity available to ensure customers' demand is met.

The fact that Calpine compares the RAD to insurance and goes on to argue that it is unnecessary demonstrates that Calpine refuses to recognize the necessity of capacity and resource adequacy and fundamentally how it is provided. For example, homeowner's insurance is not procured or provided in such a way that it only covers the owner during limited days of the year. Instead,

[8] Calpine/100, Higgins/7

insurance is always in effect providing service and benefits continuously. Like insurance, there are costs to ensure that the customer is protected. Currently, these costs are borne by cost-of-service customers, but the 'policy' will protect those customers as well as NLDA customers.

Throughout this docket, Calpine and AWEC have continually argued that liquidated damages function to provide capacity to customers. This is incorrect. Monetary payments are not a substitute for capacity that creates the energy necessary for load service. Payments in lieu of delivery will not ensure reliable service and will not satisfy customers whose service is interrupted. Reliable operation of the power system depends robust planning driven by a focus on adequacy.

With regard to the RAD cost, PGE provided an indicative price of new supply in its NLDA filing and explained in testimony that the RAD pricing would be determined by functionalizing resource adequacy rather than based on the incremental price of a new peaking unit. Resource adequacy is provided by the system and currently funded solely by cost-of-service customers. By using the proposed pricing approach, PGE is following established pricing practices and methodologies to determine each customer class's fair share of costs associated with resource adequacy.

c. **If the Commission were to accept Calpine's characterization of the RAD as an "insurance policy," for purposes of adopting an interim measure, please address whether it would be more reasonable to calculate the RAD based on a lower percentage of an NLDA customer's peak load, such as the percentage associated with a commonly used planning reserve margin (like the 16 percent used in the 2019 PNUCC Northwest Regional Forecast).**

That approach would not be more reasonable. As detailed in part a above, PGE's RAD proposal is not based on the NLDA customer's peak demand. While peak demand is the billing determinant, the RAD is based on the functionalized cost of providing resource adequacy and each rate schedule's capacity requirement is determined using a widely accepted capacity planning model. Doing so ensures that customers appropriately pay for the services they are receiving while following established rate making practices. It is not appropriate to allow a subset of customers to enjoy the full adequacy benefits of the system at a fraction of the cost that other customers are paying for the same service.

A planning reserve margin (PRM) assumes that some level of planning is performed and capacity procured to address the base needs of the customer(s). The PRM represents an acceptable level of capacity above peak needs to meet reserve obligations and handle unexpected events such as forced outages and load excursions. In order to meet reliability objectives, capacity is needed for both the peak needs *and* the PRM. PGE's capacity planning methodology uses a more robust analytical approach that targets a widely accepted statistical measure of resource adequacy. Regardless of the methodological approach, the record demonstrates there is no planning or capacity procurement for these expected new large loads. Short-term wholesale market energy purchases are not bundled with capacity and do not constitute physical supply from known sources that is able to meet the varying demands of the system.