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Via Electronic Filing

Public Utility Commission of Oregon
Attention: Filing Center
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Re: UM 2011 – General Capacity Investigation

PGE appreciates the opportunity to provide additional comments in this docket. PGE believes that this proceeding has been valuable to help provide information regarding how PGE defines, acquires and values capacity from a planning and acquisition lens. PGE looks forward to continued discussion of these issues at the upcoming workshops in this proceeding.

As an initial matter, PGE would like to clarify our understanding of the use of the term capacity value in the context of this proceeding and the difference between valuing capacity for planning purposes compared to the up-to-date price signals for capacity that are received in resource procurement activities. In December 16, 2019 Comments, PGE noted that capacity value represents the estimated dollar value of a resource's capacity contribution and is calculated based on a presumed cost of capacity multiplied by the resource's capacity contribution. Capacity value is a construct for translating the capacity contribution of a resource to a dollar value for the purpose of either comparing between two or more resources or another use such as calculating the administratively-determined avoided cost payments for resources procured outside of competitive or negotiated processes. In the context of generation capacity value for the purpose of administratively-determined avoided cost payments for resources procured outside of a competitive or negotiated process, it is intended to reflect the value of avoiding procurement of a new long-term capacity resource.

Importantly, this definition of capacity value is currently distinct from resource compensation for resources procured through competitive or negotiated processes. In competitive processes, bidders offer prices and terms for resources and PGE compares costs (bid prices), benefit streams, terms, and risks of each resource. Capacity values set for administratively-determined avoided cost payments, on the other hand, are currently based on planning estimates of system capacity benefits. Administratively-determined avoided cost payments for capacity value do not currently benefit

from opportunities presented in competitive procurement, including the opportunity to procure at costs below the avoided cost rate and to evaluate resource terms and conditions for risk as well as cost. PGE has advocated for the Commission to adopt an RFP-based approach to set avoided cost prices for PURPA qualifying facilities but understands that these issues will be addressed in the avoided cost proceeding (UM 2000).

For planning purposes, the capacity value of a resource is calculated by multiplying its capacity contribution by the cost of obtaining capacity from a new long-term capacity resource (referred to in these responses as an "alternative capacity resource" or an "alternative resource"). The capacity contribution is estimated based on IRP methodologies. The capacity cost specifically associated with obtaining capacity from an alternative resource is determined through the net Cost of New Entry (or net CONE) calculation, which starts with the all-in cost of the alternative resource and subtracts the other values provided by that alternative resource to meet system needs other than capacity needs (e.g., energy value and flexibility value), consistent with IRP methodology. The all-in cost of the alternative resource could be determined through competitive procurement outcomes or estimated from IRP assumptions. PGE determines the alternative resource's energy value and flexibility value adjustments to isolate the value associated with capacity based on IRP methodologies.

In addition to explaining how PGE views capacity valuation in this proceeding, PGE would also like to underscore the process concerns we raised in our December 16 Comments. While an informal investigation docket is useful for gathering information and creating a better understanding of issues, PGE continues to recommend that this is not the appropriate format for the review and approval of methodologies—which should be conducted through a contested docket with a robust evidentiary record supported by testimony. Should the Commission desire new methodologies and policies for compensating resources for capacity, PGE urges the Commission to consider these methodologies and policy changes with the benefit of factual evidence provided in a contested case proceeding.

As discussed in PGE's response to Part A, PGE considers the appropriate scope of this docket to be the consideration of generation capacity value. In that context, PGE responds to the questions as follows.

B. How Should Capacity Be Valued?
Capacity Value as a Function of Resource Type

6. Does capacity value compensation require a capacity resource to be available to meet all reliability needs in all time frames?

- **a. Can a dedicated physical asset qualify to meet all reliability needs, or does it need to be supplemented with other resources?**
- **b. Can a portfolio of resources that meet the availability requirement qualify for the same or better compensation than a dedicated physical asset?**
- **c. Can a financial contract qualify for the same or better compensation than a physical asset?**

PGE assumes that "capacity value compensation" in this context refers to a generation capacity value included in an avoided cost calculation. PGE notes again that customers are best served when resource compensation is determined through competitive procurement. In contrast to current avoided cost frameworks, compensation under competitive procurement is based on offers from bidders and provides the opportunity to secure resources at costs below avoided cost rates. PGE also notes that offers from bidders may not contain explicit capacity payments.

PGE assumes that "time frames" in this context refers to hours and months of the year. A resource does not need to be available in all hours or months to provide a capacity contribution. The capacity contribution assessment should reflect the characterization of the resource, including availability. PGE's use of E3's Renewable Energy Capacity Planning Model (RECAP) captures the impact of expected availability on capacity contribution, including contractual limitations and variable resource profiles.[1]

a. PGE is unclear what is meant by the phrase "dedicated physical asset" in this question. A single resource is unlikely to be able to meet the capacity needs of a system in all hours due to forced outage and maintenance events. A single resource may provide multiple benefits to a system in addition to generation capacity value, as discussed in PGE's responses to Part A of these comments. The values from other benefits are outside the scope of this docket.

b. PGE is unclear what is meant by the phrase "meet the availability requirement" in this question. The capacity contribution (and the corresponding capacity value) of a portfolio of resources may be less than, equal to, or greater than the capacity contribution of a single resource, depending on the characteristics of each and the system needs. For example, when considering simple-cycle combustion turbines with the same forced outage rate, three

[1] Section I.3 of PGE's 2019 IRP.

100 MW turbines will have a higher capacity contribution than one 300 MW turbine. This is due to a greater probability of a larger outage from the single large unit relative to the multiple small units. PGE's capacity contribution analysis can and does incorporate these types of considerations and/or characteristics of resources and portfolios.

c. No, as stated in PGE's response to Staff Question No. 005 filed on December 16, 2020, financially settled transactions that do not include physical power delivery do not offset the need to procure resources to meet capacity needs, and therefore do not provide capacity value. Financially settled transactions provide only monetary exchange and do not require physical assets or a system to support them. Financial contracts may provide value in the form of price certainty and protection, similar to a physical resource, but do not provide capacity to meet system needs. On a procurement basis, PGE does not credit capacity value to uncommitted purchases of physical power when those deliveries: a) are not tied to a physical generating asset or a portfolio of assets; and b) are economically interruptible through payment of financial damages without additional recourse.

7. Regarding the capabilities listed in question 4 above, what should be the qualification criteria for determining if a resource can meet these needs, assuming the information, communications and control systems are in place to support development of qualification criteria?

As discussed in PGE's response to Staff Question No. 004, PGE considers the appropriate scope of this docket to be capacity value based on contribution to meeting generation capacity needs. Other values such as flexibility value and locational value are outside the scope of this docket.

In general, the main qualifying criteria for a resource to provide a capacity contribution ("resource adequacy" from Question No. 004) are: the resource must be able to deliver power to PGE's system, the output of the resource or portfolio must be committed for PGE's use either through contract or ownership, and the delivery must not be economically interruptible through payment of financial damages without additional recourse. PGE notes that there are exceptions, such as for energy efficiency measures which modify load but for which there are not explicit agreements or rights between PGE and the "resources". PGE notes that resource adequacy is a complex topic that must consider multiple factors to determine eligibility and contribution of resources. The above list is not meant to encompass all such factors.

In the context of avoided cost payments, PGE notes that qualification requirements vary by the avoided cost structure. Projects seeking PURPA avoided cost contracts have a specific set of

requirements that are distinct from demand-side resources such as energy efficiency measure deployment by the Energy Trust of Oregon.

Competitive procurement processes and negotiated procurements of utility-scale capacity resources have specific sets of qualifying criteria and are not compensated through administratively-determined avoided cost structures.

8. Should supply-side and demand-side resources that demonstrate the capability to satisfy the qualification criteria for that type of capacity be valued in the same way?

The capacity contribution and capacity value of supply-side and demand-side resources should be estimated using the same methodologies. Differences in contribution may arise due to resource availability, dispatchability, and other attributes as described in PGE's response to Part A of Staff's questions. The capacity contribution and capacity value methodologies should be based on those used in the IRP. Capacity value is estimated based on capacity contribution (in MW) multiplied by the net cost of new entry (net CONE) of a new long-term capacity resource (in $/MW-yr) based on IRP methodologies.

Importantly, capacity value estimates for resources may be distinct from capacity compensation made to those resources, both for supply-side and demand-side resources. Outside of administratively-determined avoided cost prices, the cost of competitively procured resources are based on bidders' offers or negotiated costs. As such, there is an opportunity to reduce customer costs through agreements for pricing below those calculated for avoided cost purposes.

Capacity Value as a Function of Temporal, Durational, Locational and Size Attributes of Resources

9. How should the value of each type of capacity be calculated and how should its temporal availability (e.g. short vs. long-term capacity) affect the valuation?

As stated previously, in this docket, PGE understands capacity value to refer to the generation capacity value of a resource. As such, the values of other benefits to a system that a resource might provide should be considered outside of this docket.

Capacity value is a construct for translating capacity contribution to a dollar value for the purpose of comparing resources or calculating administratively-determined avoided cost payments. It is intended to reflect the value of avoiding procurement of a new long-term capacity resource ("alternative resource"). The capacity value of a resource is calculated by multiplying its capacity contribution by the cost of obtaining capacity from an alternative resource. The cost specifically associated with the alternative resource is determined through the net Cost of New Entry (or net CONE) calculation, which starts with the all-in cost of the alternative resource and subtracts the

value provided by that alternative resource in meeting other system needs (e.g., energy value and flexibility value), consistent with IRP methodology. The all-in cost of the alternative resource could be determined through competitive procurement outcomes or estimated from IRP assumptions. The capacity contribution is also estimated based on IRP methodologies, which consider the temporal availability.

The number of years over which a candidate resource is available (short vs. long-term) does not impact the capacity contribution calculation methodology, however, the specific years during which a resource is available may impact the capacity contribution and resulting capacity value. For example, if a resource is available for three years and PGE's system has an expected capacity need in each of the three years, the resource may provide a capacity contribution up to the quantity of need in each year (with a corresponding capacity value for each year). However, if the resource is available for three years and PGE's system has no expected capacity need until the third year, the resource would have no capacity contribution (or capacity value) for the first two years, but may provide a capacity contribution (and capacity value) for the third year.

10. How should temporal and durational attributes of capacity be calculated?

- **a. How could temporal and durational availability affect the valuation?**
  - **i. How could availability of a system peak capacity product at critical times affect its valuation?**
  - **ii. How could availability and sustained duration of ramping capability affect valuation of a capacity product?**
  - **iii. How could seasonal availability affect valuation for a capacity product?**
  - **iv. How could ability to provide ancillary services at times of system stress affect valuation?**

The capacity value of a resource should be based on its capacity contribution. The appropriate methodology for calculating the capacity contribution (including the impact of temporal and durational attributes) may vary by utility due to differences in modeling and systems. PGE recommends that these methodologies align with the same methodology used to determine capacity need.

As discussed previously, PGE uses RECAP, a loss-of-load probability model to calculate capacity need and capacity contribution. RECAP captures the expected temporal and durational attributes of resources. For example, wind and solar resources are modeled based on multiple years of hourly generation profiles that are developed from either actual historical generation or from historical wind speed and solar irradiance data. Energy storage and demand response modeling reflects the durational aspects of different resources. Information about resource characterization in RECAP is provided in Section I.3 of the 2019 IRP.

For variable resources, it is important to capture the probabilistic and time-varying nature of a resource's generation profile. Methodologies that rely on average generation data may provide an inaccurate estimate of capacity contribution, depending on the nature of the resource.

a. The expected temporal and durational availability of a resource may decrease or increase the capacity contribution of a resource relative to a similar resource with different temporal or durational availability. For example, the capacity contribution calculated by RECAP for a battery with a six-hour duration is greater than the capacity contribution for a battery with a two-hour duration.

    i. All else equal, when comparing two resources with different probabilities of being available during hours of high system need, the resource with the higher probability of being available should have a higher capacity contribution and, therefore, a higher capacity value. Resource attributes that impact this are captured in RECAP (e.g., forced outage rates, hours of availability, wind and solar profiles).

    ii. Ramping attributes typically impact flexibility value, which PGE believes to be outside the scope of this docket.

    Capacity value is typically not impacted by the availability and sustained duration of the ramping capability of a resource. While not typical, the capacity contribution of an energy-limited resource could be impacted by constrained ramping abilities (for example, a hydro resource with storage and with significant limitations to the ability to change the rate of discharge). PGE believes the most appropriate assessment of this type of characteristic is in the capacity contribution assessment.

    iii. PGE's capacity contribution analysis reflects the seasonal availability of resources, whether that is due to contract terms that limit availability to specific months, temperature-dependent output capabilities, or seasonal changes to wind speeds and solar irradiance. Generally, a resource that is available during more hours in high need times, such as summer or winter, will have a higher capacity contribution and value than a similar resource with fewer hours of availability during high need times. For example, a resource that is available across all on-peak hours in the month of December will likely have a higher capacity contribution than a similar resource that is available across the on-peak hours of May, assuming that the system has a greater capacity need in December than in May.

    iv. As discussed in PGE's response to Staff Question No. 003, the ability to provide ancillary services is an attribute of a resource and can affect the value of a resource to a system, but in general, does not affect capacity value as defined in these comments. Accordingly, PGE believes this to be outside the scope of this docket.

PGE's capacity need assessment includes the need to provide spinning and supplemental contingency reserves. To the extent that an offer to procure generation from a resource also includes the agreement that the seller provides the required contingency reserves associated with the resource's generation, this is accounted for in PGE's capacity contribution assessment.

11. If locational capacity is something that should be compensated, which factors should be used to inform the locational value of capacity?

a. Avoided transmission costs (or needed upgrades),
b. Avoided distribution costs (or needed upgrades),
c. Impact of new capacity in a "load pocket," if applicable, ord.
d. Other factors

PGE does not believe that avoided transmission system upgrades or distribution costs should be considered within this docket. Capacity value reflects the potential to avoid alternative resources to meet expected generation capacity needs, which is separate and distinct from "locational value" resulting from avoided transmission system upgrades or distribution system costs.

a. Transmission costs may be reflected in the value of capacity only in a circumstance in which the alternative capacity resource has associated transmission costs (i.e., a transmission cost is accounted for within the all-in costs of the alternative capacity resource). For example, PGE has traditionally assumed that capacity resources for the purposes of determining capacity value have been located off-system and have associated transmission wheeling costs, which are included in the all-in cost.

   Note that a resource that has capacity value attributed to it may also have its own associated transmission costs and these costs are not part of the calculation of generation capacity value. A resource that has capacity value attributed to it may also provide the benefit of avoided transmission costs that are separate and distinct from the transmission costs associated with the alternative capacity resource. For example, a resource could be specifically located to help avoid a transmission upgrade. This locational value is separate and distinct from generation capacity value.

b. Distribution costs may be reflected in the value of capacity only in a circumstance in which the alternative capacity resource has associated distribution costs (i.e., a distribution cost is accounted for within the all-in costs of the alternative capacity resource). PGE has not yet experienced this circumstance, as the alternative capacity resource has traditionally been assumed to be located off-system.

   Note that a resource that has capacity value attributed to it may also have its own associated distribution costs and these costs are not part of the calculation of generation capacity

value. A resource that has capacity value attributed to it may also provide for avoided distribution costs that are separate and distinct from distribution costs associated with the alternative capacity resource. For example, a resource could be specifically located to help avoid a distribution upgrade. This locational value is separate and distinct from generation capacity value and is outside the scope of this docket.

c. To the extent that the "[i]mpact of new capacity in a 'load pocket'" refers to a distribution system benefit, this is not part of generation capacity value and is outside the scope of this docket.

d. As discussed previously, to the extent that a resource's generation attributes are impacted by its location (due to temperature, wind speed, solar irradiance, hydro flows, the ability to deliver generation to the system, etc.), these attributes should be reflected in the resource's characterization in the capacity contribution assessment.

12. How does the scale of a given resource affect its value?

a. Is there a threshold size of a project, above or below which its value to the system as a whole changes categorically, or out of proportion to an increase or decrease the number of MWs of power it can produce?
b. Could a threshold size in a specific location sometimes affect valuation?
c. Could a threshold size affect whether MW-year or MWh compensation is appropriate.

The capacity contribution (and the corresponding capacity value) of a resource is impacted by its size. For example, a single 300 MW resource with a five percent forced outage rate will have a lower capacity contribution than three 100 MW resources with the same forced outage rate because there is a greater risk of a 300 MW outage for the single large unit. This is accounted for in PGE's capacity contribution analysis.

For variable and energy-limited resources, the capacity contribution of the resource type declines as more of the same type of resource is added to the system. This is accounted for in PGE's capacity contribution analysis. Section 6.2.3 of the 2019 IRP provides information about the declining contribution for wind, solar, and storage resources.

a. In PGE's approach to valuing capacity, there is no minimum size for a resource to provide capacity value. However, as described above, as more of a given variable, seasonal, or energy-limited resource type is added to a portfolio, the capacity contribution and capacity value of the next increment of that same resource type declines. This is an important consideration in valuing capacity to avoid misalignment between capacity value and capacity payments.

A resource cannot provide capacity contribution greater than the identified capacity need of the system as capacity need is not representative of a "market demand", but rather PGE's need to plan for capacity adequacy.

b. Yes. There may be a threshold size in a specific location due to a limitation of the expected quantity of generation that can be delivered to the system (such as a transmission limitation). The capacity contribution evaluation should reflect this limitation in the resource characterization.

c. No. The compensation unit (e.g., MWh or MW-year) for capacity is not related to size. Competitive and negotiated resource procurement agreements use compensation units that are mutually agreeable to both parties.

Benchmarking and Other Valuation Techniques for Capacity

13. Currently, simple-cycle gas plant costs are generally used to value capacity. Is this method still appropriate for some types or categories of capacity?

a. If yes, for which types?

b. If no, for which types?

i. Further, is a new or different benchmark or proxy more appropriate? If so, for which types/categories of capacity?

As discussed previously, the methodology that is appropriate for one utility may not be appropriate for another. PGE provides the responses below with respect to PGE's system at this time.

PGE assumes that the phrase "types or categories of capacity" in the request refers, in addition to generation capacity, to other system benefits such as flexibility value and distribution system value. PGE considers the other system benefits to be outside the scope of this docket.

a. For generation capacity value, PGE considers the net CONE of the avoided capacity resource to be the appropriate value in the absence of competitive procurement. The net CONE for capacity value is based on the all-in costs for the avoided capacity resource net of the value of the non-capacity benefits. In PGE's 2019 IRP, the net CONE is based on the lowest cost capacity resource in the Reference Case (a simple-cycle combustion turbine, or SCCT). The net CONE for capacity value accounts for the fixed and variable costs of the SCCT minus the forecasted energy value and flexibility value.

b. PGE considers system benefits other than generation capacity value to be outside the scope of this docket. While outside the scope, PGE notes that 2019 IRP does not use the SCCT to determine other values that a resource might bring to the system, such as energy value, flexibility value, or distribution system value.

i. The valuation of benefits other than generation capacity value should be considered outside the scope of this docket.

14. Should capacity compensation for Distributed Energy Resources (DER) be based solely upon contribution to meeting an identified system need, or should it be supplemented with other factors considered in DER valuation? How relevant are the following factors for capacity valuation, and which are missing?

a. Avoided environmental costs
b. Avoided fuel costs
c. Avoided plant O & M costs
d. Avoided generation capacity costs (capex)
e. Avoided cost of transmission upgrade
f. Avoided distribution capacity costs
g. New costs for new distribution system technologies
h. Costs associated with forecasting (variable renewables)
i. Ability to dispatch (i.e. small turbines, gen sets, storage) vs. lack of ability to dispatch (i.e. variable renewables)
j. Avoided (or differently calculated) costs of reserve capacity

PGE assumes that "capacity compensation" in this question refers to compensation for generation capacity value for distributed energy resources (DER) procured through administratively-determined avoided cost framework.

PGE notes that DERs may be procured competitively or through negotiated processes as well as through avoided cost constructs. Competitive procurement of resources allows customers the opportunity to acquire resources at costs that may be substantially lower than those paid through avoided cost procurement, as well as to evaluate the specific terms and risks associated with a procurement.

In responding to the sub-parts of this question, PGE reiterates that generation capacity value is appropriately determined by a resource's capacity contribution and the avoided cost of capacity. As discussed above, the avoided cost of capacity is based on the net CONE of the alternative capacity resource, which is the all-in cost of the alternative resource net of the alternative resource's benefits other than generation capacity value (e.g., energy value, flexibility value, locational value).

PGE also reiterates that while a DER or other resource considered for procurement may bring benefits other than generation capacity value to a system (e.g., energy value, flexibility value, locational value), the valuations for these other benefits are not relevant to this inquiry.

a. The net CONE of the alternative capacity resource from PGE's IRP accounts for the all-in cost of the alterative resource, which includes emissions costs associated with the economic dispatch of the alternative resource. The net CONE also removes the energy value of the economic dispatch of the alternative resource. This adjustment helps to avoid potential double counting of energy value.

b. The net CONE of the alternative capacity resource from PGE's IRP accounts for the all-in cost of the alternative resource, which includes the fuels costs associated with the economic dispatch of the alternative resource. The net CONE also removes the energy value of the economic dispatch of the alternative resource. This adjustment helps to avoid potential double counting of energy value.

c. The net CONE of the alternative capacity resource from PGE's IRP accounts for the all-in cost of the alternative resource, which includes the fixed O&M costs and the variable O&M costs associated with the economic dispatch of the alternative resource. The net CONE also removes energy value of the economic dispatch of the alternative resource. This adjustment helps to avoid potential double counting of energy value.

d. The net CONE of the alternative capacity resource from PGE's IRP accounts for the all-in cost of the alternative resource, which includes the capital costs of the alternative resource.

e. Avoided transmission system upgrade costs are not part of generation capacity value and should be considered outside the scope of this docket.

f. Avoided distribution system costs are not part of generation capacity value and should be considered outside the scope of this docket.

g. It is unclear to what the term "[n]ew costs for new distribution system technologies" refers. PGE assumes that the term refers to distribution system costs brought to a system by the addition of a DER resource. As with distribution system benefits, distribution system costs are not part of generation capacity value and should be considered outside the scope of this docket.

h. PGE assumes that the term "costs associated with forecasting (variable renewables)" refers to increased system variable operating costs due to forecast error that are brought to a system by the addition of a variable DER resource such as distributed PV. Integration costs associated with a variable DER are separate and distinct from the assessment of generation capacity value of a DER. Integration costs are discussed in Section 6.1.3 of PGE's 2019 IRP.

i. As discussed in PGE's response to Part A, utility control of dispatch is one of many attributes that can impact a resource's capacity contribution and therefore its generation capacity value. This is accounted for in PGE's capacity contribution assessments with the RECAP model. PGE's response to Staff Question No. 002 described the difference

between modeling for dispatchable and non-dispatchable distributed energy storage. Other potential system benefits from dispatchability are outside the scope of this docket (e.g., flexibility value).

j. It is unclear what the phrase "avoided costs of reserve capacity" means in this request. PGE's capacity contribution assessment in RECAP captures the value due to the ability to provide required spinning and supplemental contingency reserves. The value of providing other ancillary services is not part of generation capacity value and is outside the scope of this docket. PGE captures the value of the ability to provide some ancillary services within the flexibility value (see Section 6.2.2. of the 2019 IRP).

Several other resource attributes can impact the generation capacity value of DER resources, for example: the generation profile of variable DERs, environmental operating restrictions, limitations on the ability to deliver generation to the system, limitations to the number of calls, limitations to call durations, limitations to the hours and months of calls, customer responsiveness, and pre- and post-event load shifting characteristics.

As previously stated, the capacity contribution of a resource is a function of both the resource attributes and the nature of system needs. A DER providing generation or the ability to modify loads only during hours of low system need will have a lower capacity contribution than a DER providing generation or the ability to modify loads during hours of high system need.

15. How can proper calculation of RA capacity help to cost effectively address the region's RA issues?

PGE believes this issue should be outside the scope of this docket. "Proper calculation of RA capacity" and cost-effectiveness at a regional level require common understanding and application of RA modeling, planning, and requirements.

The rigorous assessment of capacity need and capacity contribution is one of many elements that can help with cost-effectively procuring resources, which may contribute to cost-effectively addressing regional resource adequacy issues.

The usefulness of capacity contribution information for procurement decisions is improved by using system-appropriate resource capacity contributions. These calculations should be based on quality data and vetted assumptions that are in alignment with methodologies used for assessing capacity need. PGE finds that for its system, the use of a probabilistic methodology is appropriate.

16. Given your answers to all of the above questions, do you have recommendations about what types of capacity should be compensated, how to define those types of capacity, and do you have examples of calculations or methodology suggestions you would like to offer?

In the context of generation capacity value for the purpose of administratively-determined avoided cost payments for resources procured outside of competitive or negotiated processes, under current policy, the value assessment should be aligned with IRP methodology for both the capacity contribution and the net CONE. As noted before, avoided cost contracts do not offer PGE's customers the benefits of competitive procurement, which is grounded in least-cost, least-risk planning, and a fair and transparent solicitation process with Commission oversight and involvement.

The determination of capacity contribution and capacity value are complex, resource- and utility-specific, and should be undertaken within the methodologies of a utility's IRP to ensure consistency with its determination of capacity needs. It is important to maintain this consistency by leveraging IRP methodologies rather than establishing new methodologies outside of, and inconsistent with, the IRP for specific application to non-competitively procured resources.

PGE reiterates that it does not believe this docket is the appropriate format for establishing methodologies that affect pricing, as it is not a contested docket with testimony and an evidence-based record. The Commission has already opened a docket, UM 2000, to address avoided cost prices for PURPA qualifying facilities, and modifications to those calculations should be addressed in that proceeding.

The valuation of other benefits (e.g., flexibility value, locational value) that resources may bring to a system are outside the scope of this docket. PGE looks forward to working with Staff and stakeholders in other dockets and forums as appropriate.

5. Utilities and stakeholders have already submitted a good deal of relevant information in the form of presentations and workshop participation. Staff appreciate these contributions and will continue to draw upon them, and interested parties do not need to file the same presentation materials again. However, are there other comments pertinent to the questions asked in Phases I and II (i.e. "What is Capacity," and "How do we value Capacity today?") that you would like to share with all parties, to clarify, deepen, or add nuance to your position or understanding of these issues?

PGE provides the following additional comments:

- PGE does not believe capacity value is provided by an unplanned for resource "showing up" in a real-time event. While it may provide for lower variable dispatch costs than otherwise anticipated, it does not remove the need that PGE had to plan for capacity

adequacy prior to the event and thus does not provide customers with an avoided capacity value.

- PGE believes it is important to be mindful of avoided cost applications which can implement generic, stale, more costly assumptions rather than relying upon up-to-date information made available through competitive solicitation processes.

- Many resource attributes can affect the capacity contribution and capacity value of a resource. As described above, PGE considers what the Company believes to be the key attributes as part of the resource characterization in the RECAP model. Other entities may consider different attributes depending on the needs of the system, the specifications of the analytical methods employed to determine capacity contribution, and other factors, including the relative sizes of the resources under consideration.

- The IRP provides for an internally consistent and holistic evaluation of capacity needs and the ability of resources with various attributes to meeting those needs. The IRP also allows for refinements of methodology as the nature of capacity needs and capacity resources evolve in the future. IRP methodologies for assessing capacity contribution and capacity value are established in a process that allows for extensive public involvement. Public meetings, workshops, comment periods, and discovery provide opportunity for stakeholder input, review, and engagement in both IRP planning and the Commission's IRP acknowledgment process. PGE believes that the IRP continues to be the best venue for determining resource- and utility-specific capacity contribution and capacity value methodologies.

Thank you for your assistance. If you have any questions, please do not hesitate to call me.

Sincerely,

Erin E. Apperson
Assistant General Counsel

EEA:np