Attachment 1

Proposed Incremental Cost Methodology
Renewable Resources Cost Analysis

Background

In these workgroups, Pacific Power seeks clarification on the treatment and methodology for calculation of incremental costs of certain resources not directly contemplated in existing regulation or in previously filed renewable portfolio standard (RPS) reports. As the renewable energy landscape shifts to cleaner outcomes, utilities are and will be considering and modeling new resource decisions to meet the needs of their customers. Pacific Power has already begun addressing these needs by repowering existing renewable resources to increase the associated nameplate capacity in order to take advantage of time-limited tax opportunities. Below, the company outlines the approach it took to calculating incremental costs for these repowered wind resources in its 2019 RPS compliance report. It also identifies potential alternative approaches for discussion.

Three wind resources were repowered in PacifiCorp's 2017 Integrated Resource Plan (IRP), the most recently acknowledged IRP by the Washington Utilities and Transportation Commission (Commission). Because these resources experienced capacity increases[1] as a result of these capital investments, the company attempted to find the best way to capture this change in RPS reporting. These resources were forecast to be used for 2019 compliance.

As a result, when Pacific Power filed its 2019 Renewable Portfolio Standard report on May 31, 2019 (the 2019 RPS Report), the company included the incremental costs – or benefits – of renewable wind resources in construction to be repowered at increased capacities in the given compliance year (Alternative 2 below). The company met with Commission staff during June 2019 and pursuant to such discussions, filed a revised 2019 RPS Report on July 2, 2019. The July 2, 2019 version of the 2019 RPS Report revised the Incremental Cost calculation to include the incremental cost information for resources that are not included in the West Control Area inter-jurisdictional cost allocation methodology but that are eligible for compliance in Washington.

Per staff recommendation, the Commission determined Pacific Power's inclusion of incremental costs for repowered resources in the 2019 compliance year was inappropriate and directed the company to remove the benefits of repowering from its calculations (Alternative 1 below) and refile its final 2019 RPS compliance report[2]. PacifiCorp filed its second revised RPS Report on August 23, 2019; this second revised 2019 RPS Report was accepted by the Commission at its September 12, 2019 public meeting. Prior to preparation of the company's

[1] WAC 480-109-210(2)(a)(i)(B) requires the utility to "identify the capacity value of each eligible renewable resource as calculated in the utility's most recent integrated resource plan (IRP) acknowledged by the Commission".

[2] Commission Docket UE-190448, Order 01 at 3 (September 12, 2019) (*stating* that the Commission considered the Company's 2019 RPS Report at the August 8, 2019 public meeting and directed Commission Staff and the Company to collaborate and bring the 2019 RPS Report into compliance).

2020 RPS report, the company seeks to reach consensus on the appropriate methodology for treatment of repowered resources in its incremental cost calculation.

Pacific Power's key guiding principles for this discussion are:

1) Incremental costs/benefits for repowered resources should be aligned with the compliance period in which those resources are forecast to be used to accurately reflect the plan for compliance.
2) Updated capacity values for repowered resources consistent with WAC 480-109-210(2)(a)(i)(B) should be included in the incremental cost calculation.
3) Repowered renewable resources and non-eligible resources consistent with WAC 480-109-210(2)(a)(i)(C) should be aligned based on "time of acquisition" for the renewable resource.

Alternative 1: Status Quo

No updates to the one-time calculation performed at the time of acquisition.

Table 1

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2007 IRP	• **One resulting incremental cost calculation.** Apply the annual costs and benefits from the point of acquisition all normalized over the original facility useful life to get a single $/MWh value. • The non-eligible resource is assumed to be from the IRP at the *time of acquisition* of the eligible resource. • **Benefits:** No changes to status quo, consistent with one-time calculation. • **Disadvantages:** Does not reflect extended useful life, increased capacity, or renewed production tax credits, and potentially results in over-inflated incremental cost. Resource will continue to generate RECs beyond the useful life contemplated in this approach.

Alternative 2 – Retain Original Non-Eligible Resource

The original eligible resource is compared to the original non-eligible resource, but life, capacity and new annual costs are included through the extended useful life of the resource.

Table 2

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2007 IRP	• **One resulting incremental cost calculation.** Annual costs/benefits from the point of acquisition to repowering unchanged from original resource one-time cost calculation. From the point of repowering forward, revised annual costs/benefits are calculated through the extended useful life of the resource using repowering assumptions. All costs and benefits are normalized over the extended useful life of the resource i.e. 40+ year. • Extends life of the resource compared to non-eligible resource selected from IRP at the time of acquisition (e.g. 2007) • The non-eligible resource is assumed to be from the IRP at the *time of acquisition* through the entire (extended) life of the qualifying resource. • **Outcome:** This reflects incremental cost based on original acquisition decision and captures value of extended life and benefits of renewed production tax credits. • **Disadvantages:** Requires a second calculation for the same resource. *Inconsistent with the "one-time calculation" approach.*

Alternative 3 – Eligible Resource is Compared to Updated Non-Eligible Resource
The original eligible resource is compared to an updated non-eligible resource for full, extended useful life of the facility.

Table 3

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2017 IRP	• **One resulting incremental cost calculation.** Same as Table 2 above. • The non-eligible resource is assumed to be from the IRP at the *time of repowering*. • **Outcome:** This essentially treats the repowering decision as if it is an acquisition decision, in that you are comparing the entire qualifying resource to a non-eligible resource at the time of repowering. • **Disadvantages:** Eligible resource from the point of acquisition to the point of repowering is being compared to a non-eligible resource cost from the future. Requires a second calculation for the same resource. *Inconsistent with the "one-time calculation" approach.*

Alternative 4 – Split Life and Compare to Two Different Non-Eligible Resources

The original eligible resource is compared to the original non-eligible resource up to the point of repowering, and compared to updated non-eligible resource from repowering to end of the facility's useful life.

Table 4

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2007 IRP (original proxy to repowering), 2017 IRP (repowering to end of useful life)	• **One resulting incremental cost calculation.** Same as Table 2 above. • The non-eligible resource selection is aligned to the decision point: from acquisition to repowering using a non-eligible resource selected from IRP at the *time of acquisition*, then aligning non-eligible resource from the point of repowering forward using a non-eligible selection from IRP at the *time of repowering*. • **Outcome:** Aligns each segment of the resource with its most-similar vintage non-eligible resource. • **Benefits:** Most closely resembles annual costs as they might flow into customer rates. • **Disadvantages:** Requires a second calculation for the same resource. *Inconsistent with the "one-time calculation" approach.*

Alternative 5 – Retire Original Eligible Resource

The original eligible resource is retired at the point of repowering. Establish a new eligible resource from the time of repowering and compare it to a non-eligible resource from the most recent IRP at the time of repowering.

Table 5

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2007 IRP (retired resource), 2017 IRP (new eligible repowered resource)	• **One resulting incremental cost calculation.** The eligible resource is treated as a new resource starting from the year of repowering with a non-eligible resource selected from IRP at the *time of repowering*. • The original resource analysis is discarded as if that resource is retired, with the exception of ongoing capital costs, which are brought forward to the repowered resource costs, because those capital costs continue. • **Benefits:** One calculation. • **Disadvantages:** Results in over-inflated incremental cost. Potential that repowered incremental costs are tied to older vintage RECs that were generated under a different cost basis. There is *no guidance in the regulation or statute regarding the threshold that would trigger a "new acquisition"*.

Alternative 6 – Efficiency Gain

No updates to the one-time calculation performed at the time of acquisition. The efficiency gained from repowering is treated as a new resource from the time of repowering to end of extended useful life.

Table 6

Resource	Non-eligible Resource	Implications
Goodnoe Hills Leaning Juniper Marengo I and II	2007 IRP (original, acquired resource), 2017 IRP (efficiencies gained)	• **Two incremental cost calculations.** Apply the annual costs and benefits from the point of acquisition, normalized over the original facility useful life, i.e. 20+ years. The efficiency gain from repowering (net increase in generation) is treated as a new resource starting from the year of repowering through the extended useful life. • The non-eligible resource selection is aligned to the decision point: from acquisition to repowering compare to a non-eligible resource selected from IRP at the *time of acquisition*, from the point of repowering forward compare to a non-eligible selection from IRP at the *time of repowering*. • **Benefits:** Consistent with one-time calculation requirement for original eligible resource. • **Disadvantages:** Requires methodology to blend two values into a single $/MWh. There is no guidance in the regulation or statute regarding the threshold that would trigger a "new acquisition".