

ROCKY MOUNTAIN POWER
AVOIDED COST CALCULATION

STANDARD RATES FOR AVOIDED COST PURCHASES FROM
QUALIFYING FACILITIES THAT QUALIFY FOR
SCHEDULE NO. 37

UTAH – Apr 2020

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OVERVIEW

Schedule 37 contains avoided cost prices to be paid to small qualifying facilities (“QF”) and applies to QFs with a design capacity of 1 MW or less for qualifying cogeneration facilities and 3 MW or less for small power production facilities. Prices are available for a cumulative total of 25 MW. In compliance with the Commission’s February 12, 2009, Order in Docket No. 08-035-78 on Net Metering Service, Schedule No. 37 avoided costs also establish the value or credit for net excess generation of large commercial customers under the Schedule No. 135 Net Metering Service.¹

In compliance with Commission’s January 23, 2018 Order in Docket No. 17-035-T07 and 17-035-37, the Company provides avoided costs rates for Schedule 37 reflecting the Proxy/PDDRR methodology applicable under Schedule 38 and with only signed QFs included in the QF queue.

The proposed rates are based on the Schedule 38 avoided cost inputs contained in the Company’s April 9, 2020 quarterly avoided cost inputs compliance filing (2019.Q4 Filing). The proposed rates for wind resources incorporate the non-routine methodology change proposed by the Company in its January 10, 2020 avoided cost inputs compliance filing.

Consistent with the Commission’s January 23, 2018 Order in Docket No. 17-035-T07 and 17-035-37, when a QF defers or avoids a renewable resource, the Company retains the QFs renewable energy credits (RECs) on behalf of ratepayers. When a QF’s avoided capacity costs are not based on the costs of a renewable resource, the QF is entitled to the RECs associated with its output.

DESCRIPTION OF THE AVOIDED COST STUDY SUMMARY

“20-035-T04 RMP Appendix 1 - AC Study Summary 03-26-20” contains the summary of proposed avoided cost rates by QF type.

Table 1 presents the timing of deferrable resources as listed in Table 8.18 of 2019 Preferred Portfolio, Volume I. Table 1 shows the renewable resources the Company plans to acquire over the 20-year planning period.

¹ Docket No. 08-035-78, February 12, 2009 Order, U.P.S.C 24 (2009).

The timing of the deficiency period for a baseload QF is determined based on the next deferrable thermal resource that has not been already displaced by signed contracts. **Table 2** shows the current queue of signed or terminated contracts after the 2019 IRP was prepared. A 10 MW baseload QF displaces FOTs for 2020-2025 and 10.3 MW of Naughton simple cycle combustion turbine in 2026.

The deficiency period for a wind QF is based on the next deferrable IRP wind resource that has not been already displaced by signed wind contracts. Based on the current signed contracts and the Company's proposed non-routine methodology update, a 10 MW incremental wind QF partially displaces 10 MW of Utah wind resource starting in 2023. The Company retains 100% of the RECs starting in 2023.

The deficiency period for a tracking solar QF is based on the next deferrable IRP solar resource that has not been already displaced by signed solar contracts. A 10 MW tracking solar QF displaces 3.2 MW of solar with battery storage resource located in Utah North in 2024. The Company retains 100% of the RECs starting in 2024.

The deficiency period for a fixed-tilt solar QF is based on the next deferrable IRP solar resource that has not been already displaced by signed solar contracts. A 10 MW fixed-tilt solar QF displaces 1.4 MW of solar with battery storage resource located in Utah North in 2024. The Company retains 100% of the RECs starting in 2024.

In its Order in Docket No. 09-035-T14, the Commission directed the Company "to label Table 1 with the applicable planning reserve margin assumption (e.g., 12 or 15 percent) in all subsequent filings of Schedule No. 37 rates." The IRP uses planning reserves to account for operating reserves, regulating reserves, load forecast errors and other planning uncertainties. As shown on Table 1, the 2019 IRP utilized a 13 percent planning reserve margin.²

Table 3 presents a comparison of the proposed avoided cost rates to the currently effective rates for each QF type. **Table 4** and **Table 5** summarize natural gas and electricity market price forecasts used in the calculation of proposed rates in this filing.

DESCRIPTION OF AVOIDED COST STUDY WORKPAPERS

Baseload QF

The following supporting files contain calculations of avoided cost rates for Baseload QFs:

² 2019 Integrated Resource Plan. Volume II. Appendix I: Planning Reserve Margin Study. pg. 137
Available online at:
https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2019_IRP_Volume_II_Appendices_A-L.pdf

20-035-T04 RMP CONF Workpaper 1a - GRID AC Study Thermal 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2020-2029

20-035-T04 RMP CONF Workpaper 1b - GRID AC Study Thermal 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2030-2038

20-035-T04 RMP Wkpr - Avoided Cost Study-Thermal 03-26-20.xlsx:

- **Table 1:** summarizes the annual avoided energy costs based on GRID runs and shows the calculation of the annual avoided capacity costs. A 10 MW baseload QF displaces FOTs for 2020-2025 and 10.3 MW of Naughton simple cycle combustion turbine in 2026.
- **Table 2:** summarizes monthly avoided energy costs based on the GRID runs
- **Table 4:** summarizes annual natural gas price forecasts for East and West side locations
- **Table 5:** shows the monthly calculation of avoided capacity costs and avoided energy costs. Total unit avoided costs (\$/MWh) are calculated by summing the avoided energy cost dollars (based on GRID runs) and the avoided capacity cost dollars (based deferred resource fixed costs) and dividing by the generation of the QF.

20-035-T04 RMP Wkpr - QF Pricing Detail-Thermal 03-26-20.xlsx: contains the calculations of the monthly on-peak (HLH) and off-peak (LLH) avoided cost rates by spreading total monthly avoided cost dollars (both energy and capacity) based on projected Palo Verde (“PV”) HLH and LLH market prices.

Wind QF

The following supporting files contain calculations of avoided cost rates for Wind QFs:

20-035-T04 RMP CONF Workpaper 1a - GRID AC Study Wind 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2020-2029.

20-035-T04 RMP CONF Workpaper 1b - GRID AC Study Wind 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2030-2038

20-035-T04 RMP Wkpr - Avoided Cost Study-Wind 03-26-20.xlsx:

- **Table 1:** summarizes the annual avoided energy costs based on GRID runs and shows the calculation of the annual avoided capacity costs. During the deficiency period, wind QF pricing reflects avoided fixed costs of 2023 Utah wind resources

- in the 2019 IRP preferred portfolio. PacifiCorp retains the RECs generated starting in 2023.
- **Table 2:** summarizes monthly avoided energy costs based on the GRID runs
 - **Table 3:** shows the total resource cost information for each the planned new resources in 2019 IRP preferred portfolio. Total resource cost information included capital costs, and fixed and variable Operation and Maintenance (O&M) expenses, and tax credits if applicable.
 - **Table 4:** summarizes annual natural gas price forecasts for East and West side locations
 - **Table 5:** shows the monthly calculation of avoided capacity costs and avoided energy costs. Total unit avoided costs (\$/MWh) are calculated by summing the avoided energy cost dollars (based on GRID runs) and the avoided capacity cost dollars (based deferred resource fixed costs) and dividing by the generation of the QF.

20-035-T04 RMP Wkpr - QF Pricing Detail-Wind 03-26-20.xlsx: contains the calculations of the monthly on-peak (HLH) and off-peak (LLH) avoided cost rates for a Wind QF by spreading total monthly avoided cost dollars (both energy and capacity) based on projected Palo Verde (“PV”) HLH and LLH market prices.

Tracking Solar QF

The following supporting files contain calculations of avoided cost rates for Tracking Solar QFs:

20-035-T04 RMP CONF Workpaper 1a - GRID AC Study Solar T 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2020-2029

20-035-T04 RMP CONF Workpaper 1b - GRID AC Study Solar T 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2030-2038

20-035-T04 RMP Wkpr - Avoided Cost Study-Solar T 03-26-20.xlsx:

- **Table 1:** summarizes the annual avoided energy costs based on GRID runs and shows the calculation of the annual avoided capacity costs. During the deficiency period, solar QF pricing reflects avoided fixed costs of the 2024 Utah North solar with battery storage resource in the 2019 IRP preferred portfolio. PacifiCorp retains the RECs generated starting in 2024.
- **Table 2:** summarizes monthly avoided energy costs based on the GRID runs
- **Table 3:** shows the total resource cost information for each planned new resources in the 2019 IRP preferred portfolio. Total resource cost information included capital costs, and fixed and variable Operation and Maintenance (O&M) expenses, and tax credits if applicable.

- **Table 4:** summarizes annual natural gas price forecasts for East and West side locations
- **Table 5:** shows the monthly calculation of avoided capacity costs and avoided energy costs. Total unit avoided costs (\$/MWh) are calculated by summing the avoided energy cost dollars (based on GRID runs) and the avoided capacity cost dollars (based deferred resource fixed costs) and dividing by the generation of the QF.

20-035-T04 RMP Wkpr - QF Pricing Detail-Solar T 03-26-20.xlsx: contains the calculations of the monthly on-peak (HLH) and off-peak (LLH) avoided cost rates for a tracking Solar QF by spreading total monthly avoided cost dollars (both energy and capacity) based on projected Palo Verde (“PV”) HLH and LLH market prices.

Fixed Solar QF

The following supporting files contain calculations of avoided cost rates for Fixed Solar QFs:

20-035-T04 RMP CONF Workpaper 1a - GRID AC Study Solar F 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2020-2029

20-035-T04 RMP CONF Workpaper 1b - GRID AC Study Solar F 03-26-20.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2030-2038

20-035-T04 RMP Wkpr - Avoided Cost Study-Solar F 03-26-20.xlsx:

- **Table 1:** summarizes the annual avoided energy costs based on GRID runs and shows the calculation of the annual avoided capacity costs. During the deficiency period, solar QF pricing reflects avoided fixed costs of the 2024 Utah North solar with battery storage resource in the 2019 IRP preferred portfolio. PacifiCorp retains the RECs generated starting in 2024.
- **Table 2:** summarizes monthly avoided energy costs based on the GRID runs
- **Table 3:** shows the total resource cost information for each the planned new resources in 2019 IRP preferred portfolio. Total resource cost information included capital costs, and fixed and variable Operation and Maintenance (O&M) expenses, and tax credits if applicable.
- **Table 4:** summarizes annual natural gas price forecasts for East and West side locations
- **Table 5:** shows the monthly calculation of avoided capacity costs and avoided energy costs. Total unit avoided costs (\$/MWh) are calculated by summing the avoided energy cost dollars (based on GRID runs) and the avoided capacity cost

dollars (based deferred resource fixed costs) and dividing by the generation of the QF.

20-035-T04 RMP Wkpr - QF Pricing Detail-Solar F 03-26-20.xlsx: contains the calculations of the monthly on-peak (“HLH”) and off-peak (“LLH”) avoided cost rates for a fixed Solar QF by spreading total monthly avoided cost dollars (both energy and capacity) based on projected Palo Verde (“PV”) HLH and LLH market prices.