ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

1407 W North Temple, Suite 330
Salt Lake City, Utah 84114

April 30, 2019

VIA ELECTRONIC FILING

Public Service Commission of Utah
Heber M. Wells Building, 4th Floor
160 East 300 South
Salt Lake City, UT 84111

Attn: Gary Widerburg
Commission Secretary

RE: Advice Filing 19-08
Schedule 37—Avoided Cost Purchases from Qualifying Facilities (QF)
Docket No. 19-035-T07

In its February 12, 2009 Order in Docket No. 08-035-78 on Net Metering Service, the Public Service Commission of Utah ("Commission") directed Rocky Mountain Power (the "Company") to calculate and file Schedule 37 avoided costs annually in order to establish the value or credit for net excess generation of large commercial customers under Schedule 135 Net Metering Service. In its November 28, 2012 Order in Docket No. 12-035-T10, the Commission directed that future annual filings should be made within 30 days of filing the Company's Integrated Resource Plan ("IRP") or IRP Update, or by April 30 of each year, whichever occurs first.

Pursuant to Commission Rules R746-405 and as directed by the Commission in the order referenced above, the Company hereby updates Schedule 37 rates consistent with the approved methodology. Proposed tariff sheets, two appendices, and accompanying workpapers are submitted herewith for electronic filing in the above referenced matter.

The enclosed proposed tariff sheets are associated with Tariff P.S.C.U No. 50 of PacifiCorp, d.b.a. Rocky Mountain Power, applicable to electric service in the State of Utah. Pursuant to the requirement of Rule R746-405D, PacifiCorp states that the proposed tariff sheets do not constitute a violation of state law or Commission rule.

PacifiCorp respectfully requests an effective date of June 3, 2019.

Seventh Revision of Sheet No. 37.3	Schedule 37	Avoided Cost Purchases From Qualifying Facilities
Ninth Revision of Sheet No. 37.4	Schedule 37	Avoided Cost Purchases From Qualifying Facilities
Eighth Revision of Sheet No. 37.5	Schedule 37	Avoided Cost Purchases From Qualifying Facilities
Eighth Revision of Sheet No. 37.6	Schedule 37	Avoided Cost Purchases From Qualifying Facilities

Eighth Revision of Sheet No. 37.7	Schedule 37	Avoided Cost Purchases From Qualifying Facilities

It is respectfully requested that all formal correspondence and staff requests regarding this matter be addressed to:

By email (preferred)	datarequest@pacificorp.com jana.saba@pacificorp.com
By regular mail	Data Request Response Center PacifiCorp 825 NE Multnomah, Suite 2000 Portland, OR 97232

Informal inquiries may be directed to Jana Saba at (801) 220-2823.

Very truly yours,

Joelle Steward
Vice President, Regulation

Enclosures

Proposed Tariff Sheets

Redline Version

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

RATES FOR PURCHASES: The non-levelized and levelized prices shown below are subject to change from time to time to reflect changes in the Company's determination of Utah avoided costs. The prices applicable to a Utah Qualifying Facility shall be those in effect at the time a written contract is executed by the parties. Contract durations of up to 15 years are available. The levelized prices shown are for a 15-year contract and assume a ~~2018~~ 2020 starting date. Levelized prices for contracts which start after ~~2018~~ 2020 and are for periods of 15 years or less are available upon request.

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Base Load Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours ¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
2020	1.920	3.946	1.715	2.050
2021	1.816	3.618	1.685	2.038
2022	1.603	2.955	1.491	1.727
2023	1.691	2.952	1.565	1.789
2024	2.203	4.017	2.042	2.352
2025	2.367	4.467	2.194	2.718
2026	2.346	4.640	2.180	2.914
2027	2.630	4.666	2.421	2.992
2028	2.761	5.899	2.574	3.865
2029	3.147	6.703	2.947	4.443
2030	3.364	7.486	3.165	4.888
2031	3.545	7.903	3.359	5.300
2032	3.701	8.163	3.541	5.534
2033	3.878	9.145	3.740	6.047
2034	4.108	9.559	3.964	6.384
2035	4.168	10.716	4.040	6.664
2036	4.372	10.828	4.250	6.926
2037	4.459	11.241	4.355	6.839
2038	4.558	11.388	4.459	7.135

~~Deliveries During Calendar Year~~	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~2018~~	~~1.801~~	~~2.286~~	~~1.639~~	~~1.416~~
~~2019~~	~~1.896~~	~~2.325~~	~~1.660~~	~~1.479~~
~~2020~~	~~1.668~~	~~2.421~~	~~1.440~~	~~1.692~~
~~2021~~	~~1.844~~	~~2.365~~	~~1.581~~	~~1.738~~
~~2022~~	~~1.944~~	~~2.535~~	~~1.684~~	~~1.826~~
~~2023~~	~~1.935~~	~~2.904~~	~~1.710~~	~~2.095~~
~~2024~~	~~2.119~~	~~3.165~~	~~1.914~~	~~2.381~~
~~2025~~	~~2.478~~	~~3.531~~	~~2.275~~	~~2.785~~

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

~~2026~~	~~2.736~~	~~3.467~~	~~2.513~~	~~2.767~~
~~2027~~	~~2.823~~	~~3.557~~	~~2.608~~	~~2.872~~
~~2028~~	~~3.241~~	~~4.249~~	~~3.027~~	~~3.507~~
~~2029~~	~~3.631~~	~~4.947~~	~~3.393~~	~~4.089~~
~~2030~~	~~4.118~~	~~5.637~~	~~3.869~~	~~4.643~~
~~2031~~	~~4.154~~	~~5.688~~	~~3.915~~	~~4.711~~
~~2032~~	~~4.506~~	~~6.057~~	~~4.235~~	~~5.107~~
~~2033~~	~~4.586~~	~~6.130~~	~~4.345~~	~~5.221~~
~~2034~~	~~4.566~~	~~6.187~~	~~4.316~~	~~5.286~~
~~2035~~	~~4.955~~	~~6.515~~	~~4.695~~	~~5.547~~
~~2036~~	~~5.109~~	~~6.766~~	~~4.832~~	~~5.727~~
~~2037~~	~~5.198~~	~~6.877~~	~~4.948~~	~~5.870~~

Levelized Prices (Nominal)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.519	5.171	2.354	3.245

	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~15-year (2018-2032) Nominal Levelized~~	~~2.481~~	~~3.338~~	~~2.255~~	~~2.548~~

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Fixed Solar Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours
¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
	Winter	Summer	Winter	Summer
2020	1.572	2.790	1.390	1.504
2021	1.415	2.410	1.322	1.379
2022	1.294	2.305	1.213	1.364
2023	1.081	2.369	0.902	1.468
2024	1.672	2.995	1.552	1.888
2025	1.791	3.247	1.670	2.062
2026	1.875	3.312	1.741	2.195
2027	1.925	3.298	1.787	2.197
2028	2.112	4.226	1.998	2.799
2029	2.335	4.665	2.184	3.152
2030	3.859	7.451	3.640	4.988
2031	3.958	7.570	3.784	5.221
2032	4.092	7.798	3.952	5.409
2033	3.826	7.734	3.744	5.215
2034	3.949	7.949	3.865	5.330
2035	4.303	9.159	4.189	5.803
2036	4.451	9.255	4.361	6.159
2037	4.362	9.869	4.304	6.120
2038	4.545	9.920	4.491	6.321

~~Deliveries During Calendar Year~~	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh) (1)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~2018~~	~~1.526~~	~~1.758~~	~~1.457~~	~~1.110~~
~~2019~~	~~1.525~~	~~1.731~~	~~1.385~~	~~1.096~~
~~2020~~	~~1.184~~	~~1.823~~	~~1.018~~	~~1.285~~
~~2021~~	~~1.345~~	~~1.836~~	~~1.174~~	~~1.357~~
~~2022~~	~~1.421~~	~~1.960~~	~~1.255~~	~~1.421~~
~~2023~~	~~1.483~~	~~2.273~~	~~1.331~~	~~1.683~~
~~2024~~	~~1.571~~	~~2.455~~	~~1.431~~	~~1.834~~
~~2025~~	~~1.811~~	~~3.186~~	~~1.670~~	~~2.520~~

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

~~2026~~	~~1.862~~	~~2.720~~	~~1.705~~	~~2.190~~
~~2027~~	~~1.901~~	~~2.819~~	~~1.778~~	~~2.297~~
~~2028~~	~~2.465~~	~~3.334~~	~~2.377~~	~~2.845~~
~~2029~~	~~2.529~~	~~3.733~~	~~2.423~~	~~3.157~~
~~2030~~	~~3.940~~	~~5.186~~	~~3.704~~	~~4.268~~
~~2031~~	~~4.103~~	~~5.263~~	~~3.868~~	~~4.359~~
~~2032~~	~~4.200~~	~~5.379~~	~~3.948~~	~~4.523~~
~~2033~~	~~3.871~~	~~4.978~~	~~3.677~~	~~4.212~~
~~2034~~	~~4.037~~	~~5.122~~	~~3.814~~	~~4.343~~
~~2035~~	~~4.286~~	~~5.465~~	~~4.038~~	~~4.619~~
~~2036~~	~~4.561~~	~~5.964~~	~~4.300~~	~~5.041~~
~~2037~~	~~4.667~~	~~6.069~~	~~4.432~~	~~5.148~~

Levelized Prices (Nominal)(3)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.157	4.069	2.023	2.634

(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate

	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~15-year (2018-2032) Nominal Levelized~~	~~1.941~~	~~2.686~~	~~1.793~~	~~2.071~~

~~(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate~~

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Tracking Solar Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours ¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
	Winter	Summer	Winter	Summer
2020	1.554	3.366	1.369	1.825
2021	1.402	3.069	1.310	1.740
2022	1.300	2.464	1.220	1.464
2023	1.101	2.418	0.941	1.484
2024	1.655	3.419	1.541	2.084
2025	1.769	3.676	1.661	2.265
2026	1.856	3.802	1.733	2.458
2027	1.900	3.779	1.775	2.438
2028	2.084	4.908	1.986	3.261
2029	2.302	5.329	2.167	3.603
2030	4.195	8.282	3.985	5.504
2031	4.288	8.380	4.133	5.729
2032	4.439	8.654	4.327	5.954
2033	4.173	8.647	4.125	5.796
2034	4.285	8.822	4.231	5.894
2035	4.730	10.261	4.648	6.475
2036	4.848	10.340	4.791	6.817
2037	4.734	10.954	4.712	6.751
2038	4.943	11.031	4.929	6.991

~~Deliveries During Calendar Year~~	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh) (1)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~2018~~	~~1.686~~	~~1.826~~	~~1.590~~	~~1.128~~
~~2019~~	~~1.657~~	~~1.825~~	~~1.478~~	~~1.146~~
~~2020~~	~~1.211~~	~~1.946~~	~~1.031~~	~~1.362~~
~~2021~~	~~1.382~~	~~1.905~~	~~1.184~~	~~1.392~~
~~2022~~	~~1.459~~	~~2.039~~	~~1.270~~	~~1.455~~
~~2023~~	~~1.522~~	~~2.406~~	~~1.335~~	~~1.767~~
~~2024~~	~~1.613~~	~~2.600~~	~~1.456~~	~~1.937~~
~~2025~~	~~1.880~~	~~3.242~~	~~1.719~~	~~2.530~~
~~2026~~	~~1.940~~	~~2.899~~	~~1.761~~	~~2.330~~
~~2027~~	~~1.996~~	~~2.996~~	~~1.841~~	~~2.436~~
~~2028~~	~~2.575~~	~~3.552~~	~~2.433~~	~~3.001~~

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

~~2029~~	~~2.763~~	~~3.994~~	~~2.632~~	~~3.342~~
~~2030~~	~~4.515~~	~~6.004~~	~~4.231~~	~~4.918~~
~~2031~~	~~4.711~~	~~6.103~~	~~4.435~~	~~5.035~~
~~2032~~	~~4.830~~	~~6.236~~	~~4.531~~	~~5.221~~
~~2033~~	~~4.508~~	~~5.852~~	~~4.271~~	~~4.932~~
~~2034~~	~~4.719~~	~~6.035~~	~~4.441~~	~~5.102~~
~~2035~~	~~5.042~~	~~6.465~~	~~4.731~~	~~5.450~~
~~2036~~	~~5.307~~	~~7.000~~	~~4.977~~	~~5.898~~
~~2037~~	~~5.438~~	~~7.114~~	~~5.153~~	~~6.023~~

Levelized Prices (Nominal)(3)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.223	4.609	2.100	2.950

(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate

	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~15-year (2018-2032) Nominal Levelized~~	~~2.091~~	~~2.896~~	~~1.913~~	~~2.221~~

~~(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate~~

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Wind Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours
¢/kWh

Non-Levelized Prices

Deliveries During	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
Calendar Year	Winter	Summer	Winter	Summer
2020	1.788	3.523	1.594	1.811
2021	1.604	3.159	1.480	1.780
2022	1.479	2.637	1.375	1.551
2023	1.483	2.496	1.385	1.520
2024	2.036	3.711	1.864	2.254
2025	2.224	3.992	2.023	2.400
2026	2.323	4.125	2.124	2.597
2027	2.453	4.157	2.219	2.688
2028	2.331	5.309	2.205	3.493
2029	2.931	6.352	2.698	4.197
2030	4.273	8.147	3.958	5.453
2031	4.331	8.238	4.046	5.586
2032	4.379	8.180	4.134	5.628
2033	4.724	9.302	4.497	6.297
2034	4.843	9.477	4.607	6.458
2035	4.919	10.382	4.694	6.580
2036	5.027	10.365	4.809	6.767
2037	5.009	11.196	4.829	6.912
2038	5.174	11.160	4.999	7.081

~~Deliveries During~~	~~On-Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh) (1)~~	
~~Calendar Year~~	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~2018~~	~~1.606~~	~~1.958~~	~~1.409~~	~~1.205~~
~~2019~~	~~1.728~~	~~2.058~~	~~1.452~~	~~1.307~~
~~2020~~	~~1.320~~	~~1.677~~	~~1.134~~	~~1.173~~
~~2021~~	~~1.087~~	~~1.304~~	~~0.920~~	~~0.952~~
~~2022~~	~~1.486~~	~~1.882~~	~~1.272~~	~~1.347~~
~~2023~~	~~1.079~~	~~1.377~~	~~0.948~~	~~0.988~~
~~2024~~	~~1.277~~	~~1.673~~	~~1.144~~	~~1.266~~
~~2025~~	~~1.146~~	~~1.527~~	~~1.049~~	~~1.205~~
~~2026~~	~~1.331~~	~~1.734~~	~~1.219~~	~~1.384~~
~~2027~~	~~1.319~~	~~1.736~~	~~1.211~~	~~1.398~~
~~2028~~	~~0.821~~	~~1.068~~	~~0.766~~	~~0.873~~
~~2029~~	~~0.625~~	~~0.801~~	~~0.578~~	~~0.657~~
~~2030~~	~~1.488~~	~~1.927~~	~~1.379~~	~~1.591~~

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

~~2031~~	~~5.655~~	~~7.174~~	~~5.274~~	~~5.927~~
~~2032~~	~~5.739~~	~~7.283~~	~~5.364~~	~~6.093~~
~~2033~~	~~5.994~~	~~7.620~~	~~5.648~~	~~6.432~~
~~2034~~	~~6.110~~	~~7.707~~	~~5.764~~	~~6.527~~
~~2035~~	~~6.086~~	~~7.726~~	~~5.705~~	~~6.522~~
~~2036~~	~~6.194~~	~~8.035~~	~~5.814~~	~~6.775~~
~~2037~~	~~6.320~~	~~8.178~~	~~5.979~~	~~6.935~~

Levelized Prices (Nominal)

	On Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.566	4.891	2.378	3.111

	~~On Peak Energy Prices (¢/kWh)~~		~~Off-Peak Energy Prices (¢/kWh)~~	
	~~Winter~~	~~Summer~~	~~Winter~~	~~Summer~~
~~15-year (2018-2032) Nominal Levelized~~	~~1.661~~	~~2.099~~	~~1.488~~	~~1.583~~

~~(1): On- and off- peak prices are reduced by integration charges~~

Proposed Tariff Sheets

Clean Version

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

RATES FOR PURCHASES: The non-levelized and levelized prices shown below are subject to change from time to time to reflect changes in the Company's determination of Utah avoided costs. The prices applicable to a Utah Qualifying Facility shall be those in effect at the time a written contract is executed by the parties. Contract durations of up to 15 years are available. The levelized prices shown are for a 15-year contract and assume a 2020 starting date. Levelized prices for contracts which start after 2020 and are for periods of 15 years or less are available upon request.

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Base Load Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours ¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
2020	1.920	3.946	1.715	2.050
2021	1.816	3.618	1.685	2.038
2022	1.603	2.955	1.491	1.727
2023	1.691	2.952	1.565	1.789
2024	2.203	4.017	2.042	2.352
2025	2.367	4.467	2.194	2.718
2026	2.346	4.640	2.180	2.914
2027	2.630	4.666	2.421	2.992
2028	2.761	5.899	2.574	3.865
2029	3.147	6.703	2.947	4.443
2030	3.364	7.486	3.165	4.888
2031	3.545	7.903	3.359	5.300
2032	3.701	8.163	3.541	5.534
2033	3.878	9.145	3.740	6.047
2034	4.108	9.559	3.964	6.384
2035	4.168	10.716	4.040	6.664
2036	4.372	10.828	4.250	6.926
2037	4.459	11.241	4.355	6.839
2038	4.558	11.388	4.459	7.135

Levelized Prices (Nominal)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.519	5.171	2.354	3.245

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Fixed Solar Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours
¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
	Winter	Summer	Winter	Summer
2020	1.572	2.790	1.390	1.504
2021	1.415	2.410	1.322	1.379
2022	1.294	2.305	1.213	1.364
2023	1.081	2.369	0.902	1.468
2024	1.672	2.995	1.552	1.888
2025	1.791	3.247	1.670	2.062
2026	1.875	3.312	1.741	2.195
2027	1.925	3.298	1.787	2.197
2028	2.112	4.226	1.998	2.799
2029	2.335	4.665	2.184	3.152
2030	3.859	7.451	3.640	4.988
2031	3.958	7.570	3.784	5.221
2032	4.092	7.798	3.952	5.409
2033	3.826	7.734	3.744	5.215
2034	3.949	7.949	3.865	5.330
2035	4.303	9.159	4.189	5.803
2036	4.451	9.255	4.361	6.159
2037	4.362	9.869	4.304	6.120
2038	4.545	9.920	4.491	6.321

Levelized Prices (Nominal)(3)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.157	4.069	2.023	2.634

(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Tracking Solar Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours ¢/kWh

Non-Levelized Prices

Deliveries During Calendar Year	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
	Winter	Summer	Winter	Summer
2020	1.554	3.366	1.369	1.825
2021	1.402	3.069	1.310	1.740
2022	1.300	2.464	1.220	1.464
2023	1.101	2.418	0.941	1.484
2024	1.655	3.419	1.541	2.084
2025	1.769	3.676	1.661	2.265
2026	1.856	3.802	1.733	2.458
2027	1.900	3.779	1.775	2.438
2028	2.084	4.908	1.986	3.261
2029	2.302	5.329	2.167	3.603
2030	4.195	8.282	3.985	5.504
2031	4.288	8.380	4.133	5.729
2032	4.439	8.654	4.327	5.954
2033	4.173	8.647	4.125	5.796
2034	4.285	8.822	4.231	5.894
2035	4.730	10.261	4.648	6.475
2036	4.848	10.340	4.791	6.817
2037	4.734	10.954	4.712	6.751
2038	4.943	11.031	4.929	6.991

Levelized Prices (Nominal)(3)

	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.223	4.609	2.100	2.950

(1): On- and off- peak prices are reduced by integration charges and reflect 0.5% annual degradation rate

(continued)

ELECTRIC SERVICE SCHEDULE NO. 37 - Continued

Wind Facility

Volumetric Winter and Summer Energy Prices for On-Peak and Off-Peak hours
¢/kWh

Non-Levelized Prices

Deliveries During	On-Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh) (1)	
Calendar Year	Winter	Summer	Winter	Summer
2020	1.788	3.523	1.594	1.811
2021	1.604	3.159	1.480	1.780
2022	1.479	2.637	1.375	1.551
2023	1.483	2.496	1.385	1.520
2024	2.036	3.711	1.864	2.254
2025	2.224	3.992	2.023	2.400
2026	2.323	4.125	2.124	2.597
2027	2.453	4.157	2.219	2.688
2028	2.331	5.309	2.205	3.493
2029	2.931	6.352	2.698	4.197
2030	4.273	8.147	3.958	5.453
2031	4.331	8.238	4.046	5.586
2032	4.379	8.180	4.134	5.628
2033	4.724	9.302	4.497	6.297
2034	4.843	9.477	4.607	6.458
2035	4.919	10.382	4.694	6.580
2036	5.027	10.365	4.809	6.767
2037	5.009	11.196	4.829	6.912
2038	5.174	11.160	4.999	7.081

Levelized Prices (Nominal)

	On Peak Energy Prices (¢/kWh)		Off-Peak Energy Prices (¢/kWh)	
	Winter	Summer	Winter	Summer
15-year (2020-2034) Nominal Levelized	2.566	4.891	2.378	3.111

Appendix 1

Table 1
2017 IRP Update Preferred Portfolio
Excerpt from 2017 IRP Update Table 8.1, Page 108

		Capacity (MW)																				Resource Totals 1/	
	Resource	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	10-year	20-year
East	**Expansion Resources**																						
	Wind, Djohnston	-	-	-	-	-	-	-	-	-	-	-	-	-	121	-	-	-	-	-	-	-	121
	Wind, GO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	-	-	-	-	800
	Wind, UT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	149	-	149
	251C-Cedar Springs WD - 2	-	-	-	-	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	400
	100B-Ekola Flats WD - 1 (P)	-	-	-	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	250
	102B-TB Flats WD - 3 (P)	-	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	500
	245B-Uinta WD Energy Center - 2	-	-	-	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	161
	Total Wind	-	-	-	911	400	-	-	-	-	-	-	-	-	121	-	-	800	-	-	149	1,311	2,380
	Utility Solar - PV - Utah-S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	799	-	6	-	-	805
	Total Solar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	799	-	6	-	-	805
	DSM, Class 1, ID-Cool/WH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	1.3	-	4.7
	DSM, Class 1, ID-Curtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	-	1.9
	DSM, Class 1, ID-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.2	-	3.1	-	-	21.3
	DSM, Class 1, UT-Cool/WH	-	-	-	-	-	-	-	-	-	-	-	-	68.4	-	-	-	-	-	-	-	-	68.4
	DSM, Class 1, UT-Curtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43.2	40.5	2.2	-	85.9
	DSM, Class 1, UT-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	-	3.3	-	6.3
	DSM, Class 1, WY-Cool/WH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	2.9	-	7.7
	DSM, Class 1, WY-Curtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	40.7	2.0	-	45.8
	DSM, Class 1, WY-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-	-	1.9
	DSM, Class 1 Total	-	-	-	-	-	-	-	-	-	-	-	-	68.4	-	-	-	26.3	48.0	89.6	11.6	-	243.8
	DSM, Class 2, ID	3	6	6	5	4	4	5	5	5	5	4	4	4	4	4	4	3	3	2	2	47	83
	DSM, Class 2, UT	78	51	58	56	54	50	48	47	54	52	49	52	48	53	52	43	42	35	33	33	549	989
	DSM, Class 2, WY	7	10	10	10	9	11	12	12	12	13	12	11	10	9	9	7	6	7	7	7	106	189
	DSM, Class 2 Total	88	67	74	71	67	66	65	64	71	70	65	67	62	66	65	54	51	45	42	42	702	1,261
	Battery Storage - East	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	FOT Mona - SMR	-	-	-	-	-	-	-	-	-	-	-	142	300	300	300	300	300	289	300	300	-	127
	FOT Mona - WTR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	300	-	30

West	Expansion Resources																						
	Wind, WallaW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	136	-	-	136
	Wind, YK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	-	-	125
	Wind, SO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	-	73
	Total Wind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	333	-	-	333
	Utility Solar - PV - S-Oregon	-	-	-	-	-	-	-	-	-	-	-	-	-	21	95	120	169	-	-	-	-	405
	Utility Solar - PV - Yakima	-	-	-	-	-	-	-	-	-	-	-	-	-	630	-	12	8	-	-	-	-	650
	Total Solar	-	-	-	-	-	-	-	-	-	-	-	-	-	651	95	132	177	-	-	-	-	1,055
	DSM, Class 1, CA-Cool/WH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	-	-	-	2.4
	DSM, Class 1, CA-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-	-	-	-	3.7
	DSM, Class 1, OR-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.8	-	-	-	-	12.8
	DSM, Class 1, WA-Irrigate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	-	-	-	4.8
	DSM, Class 1 Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.7	-	-	-	-	23.7
	DSM, Class 2, CA	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	11	18
	DSM, Class 2, OR	51	44	40	41	29	24	23	23	20	18	18	17	16	16	16	17	15	15	16	16	313	477
	DSM, Class 2, WA	10	7	11	8	8	8	7	7	8	7	6	6	5	5	4	4	3	3	2	2	81	121
	DSM, Class 2 Total	62	52	52	51	38	33	32	31	29	26	25	24	22	22	21	21	19	18	19	18	405	616
	FOT COB - SMR	-	-	-	-	-	-	-	-	-	-	-	230	400	400	400	400	400	400	400	369	-	170
	FOT MidColumbia - SMR	311	315	400	392	395	400	387	370	400	399	400	400	400	400	400	400	400	400	400	400	377	389
	FOT MidColumbia - SMR - 2	-	-	124	-	-	45	-	-	38	-	-	375	375	375	375	375	375	375	375	375	21	179
	FOT NOB - SMR	90	4	100	71	-	-	32	58	100	100	100	100	100	100	100	100	100	100	100	100	55	78
	FOT COB - WTR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-	311	-	18
	FOT MidColumbia - WTR	253	308	303	296	303	305	310	304	317	330	343	357	400	400	400	400	400	400	400	400	303	346
	FOT MidColumbia - WTR2	-	-	-	-	-	-	-	-	-	-	-	-	258	294	309	276	368	375	231	375	-	124
	FOT NOB - WTR	-	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	100	100	100	100	-	40
	Existing Plant Retirements/Conversions	-	-	(280)	-	(387)	-	-	-	-	(82)	-	(762)	(354)	(357)	(77)	-	(717)	-	(82)	-		
	Annual Additions, Long Term Resources	150	119	127	1,033	504	99	96	95	100	96	90	90	153	859	181	207	1,897	111	489	222		
	Annual Additions, Short Term Resources	655	627	927	759	698	749	729	732	855	829	843	1,604	2,333	2,369	2,384	2,351	2,443	2,488	2,606	3,030		
	Total Annual Additions	805	746	1,054	1,792	1,202	848	825	827	954	925	934	1,695	2,486	3,228	2,566	2,559	4,340	2,599	3,095	3,252		

1/ Front office transaction amounts reflect one-year transaction periods, are not additive, and are reported as a 10/20-year annual average.

The 2017 IRP Update was prepared using a 13% planning reserve margin. See 2017 IRP, page 10.

Table 2
Signed QF Queue

QF Queue						
No.	QF	Partial Displacement	Name plate	CF	Capacity Contribution	Start Date
1	Soda Lake Geothermal	13.3	20.0		66.5%	2019 09 01
2	Sprague River (terminated)	-4.5	-7.0		64.8%	
3	Ivory Pine (terminated)	-6.5	-10.0		64.8%	
4	Deschutes Valley Water District (Op	5.9	5.9		100.0%	2021 01 01
5	Cove Mountain Solar	34.6	58.0		59.7%	2020 12 31
6	Hunter Solar	59.7	100.0		59.7%	2020 12 31
7	Milford Solar	59.1	99.0		59.7%	2020 11 30
8	Milican Solar	29.2	45.0		64.8%	2020 12 31
9	Prineville Solar	35.6	55.0		64.8%	2020 12 31
10	Sigurd Solar	47.8	80.0		59.7%	2020 12 31
11	Three Sisters Irrigation District (200	0.2	0.2		100.0%	2018 11 05
12	Cove Mountain Solar II	72.8	122.0		59.7%	2020 11 01
13	Non-deferrable PPA_P2	46.6	78.0		59.7%	2022 05 01
14	Non-deferrable PPA_P3	59.7	100.0		59.7%	2023 07 01
15	Non-deferrable PPA_P4	59.7	100.0		59.7%	2025 06 01
16	Non-deferrable PPA_P5	59.7	100.0		59.7%	2026 08 01
17	Non-deferrable PPA_P6	29.9	50.0		59.7%	2028 06 01
18	Everpower	-37.9	-240.0		15.8%	2019 11 01
19	IRP17 WYAE WindUinta2020	-25.4	-161.0		15.8%	2020 11 01
20	Monticello Wind QF	-12.5	-79.2		15.8%	2021 12 31
21	Simplot Phosphates	0.0	13.3		0.0%	2018 02 01
22	Tesoro Non Firm	0.0	25.0		0.0%	2019 01 01
23	Kennecott Smelter Non Firm	0.0	31.8		0.0%	2019 01 01
24	Kennecott Refinery Non Firm	0.0	6.2		0.0%	2019 01 01
25	ExxonMobil	0.0	98.0		0.0%	2019 01 01
26	Tata Chemicals	0.0	30.0		0.0%	2019 01 01
27	Cedar Springs Wind III	19.0	120.0		15.8%	2020 12 31
28	Roseburg Weed QF	2.9	10.0		29.0%	2019 01 01
29	Slate Creek Hydro QF	0.6	4.2		14.0%	2019 01 01
30	Yakima Tieton Cowiche QF	1.0	1.5		67.0%	2019 01 01
31	COID Siphon QF	3.1	5.0		62.0%	2021 01 01

Total Signed MW	553.39	860.90			

Table 3
Comparison between Proposed and Current Avoided Costs

	BASE LOAD			WIND			SOLAR FIXED			SOLAR TRACKING		
Year	Proposed ($/MWH)	Current ($/MWH)	Total Difference ($/MWH)	Proposed ($/MWH)	Current ($/MWH)	Total Difference ($/MWH)	Proposed ($/MWH)	Current ($/MWH)	Total Difference ($/MWH)	Proposed ($/MWH)	Current ($/MWH)	Total Difference ($/MWH)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
			(a) - (b)			(d) - (e)			(g) - (h)			(j) - (k)
2020	$22.58	$17.45	$5.13	$19.38	$12.57	$6.80	$19.28	$13.73	$5.55	$21.58	$14.49	$7.09
2021	$21.48	$18.49	$2.99	$17.96	$10.17	$7.79	$17.13	$14.81	$2.31	$19.76	$15.34	$4.42
2022	$18.41	$19.61	($1.20)	$16.03	$14.20	$1.83	$16.05	$15.72	$0.33	$16.92	$16.29	$0.62
2023	$19.05	$20.74	($1.69)	$15.82	$10.44	$5.39	$14.89	$17.27	($2.38)	$15.56	$18.18	($2.62)
2024	$25.17	$22.93	$2.24	$22.35	$12.73	$9.62	$20.86	$18.49	$2.37	$22.68	$19.54	$3.13
2025	$27.61	$26.61	$1.00	$24.13	$11.71	$12.42	$22.50	$22.71	($0.21)	$24.36	$23.78	$0.58
2026	$28.10	$28.12	($0.02)	$25.41	$13.52	$11.89	$23.29	$21.35	$1.94	$25.45	$22.77	$2.69
2027	$30.03	$29.05	$0.98	$26.36	$13.50	$12.87	$23.57	$22.00	$1.56	$25.60	$23.54	$2.07
2028	$34.56	$34.06	$0.49	$29.45	$8.44	$21.01	$28.03	$27.52	$0.51	$31.24	$29.25	$1.99
2029	$39.45	$38.75	$0.70	$35.85	$6.37	$29.48	$30.98	$29.34	$1.64	$34.18	$32.14	$2.04
2030	$43.01	$44.06	($1.05)	$49.31	$15.27	$34.05	$50.28	$43.26	$7.02	$56.52	$50.16	$6.36
2031	$45.64	$44.53	$1.11	$50.23	$57.67	($7.43)	$51.47	$44.57	$6.90	$57.67	$51.73	$5.94
2032	$47.58	$48.06	($0.47)	$50.72	$58.76	($8.04)	$53.17	$45.63	$7.54	$59.71	$53.01	$6.70
2033	$51.42	$48.98	$2.44	$56.02	$61.74	($5.72)	$51.24	$42.19	$9.06	$58.08	$49.69	$8.39
2034	$54.21	$49.02	$5.19	$57.35	$62.81	($5.46)	$52.75	$43.72	$9.03	$59.38	$51.62	$7.76
2035	$57.23	$52.58	$4.65	$59.31	$62.54	($3.23)	$59.00	$46.50	$12.50	$67.22	$55.19	$12.02
2035	$57.23	$52.58	$4.65	$59.31	$62.54	($3.23)	$59.00	$46.50	$12.50	$67.22	$55.19	$12.02
(x) Extrapolated												
15 Year (2020 to 2034) Levelized Prices (Nominal) @ 6.91% Discount Rate												
$/MWH	$30.74	$29.51	$1.23	$29.21	$20.37	$8.84	$27.97	$25.02	$2.94	$31.00	$27.58	$3.42
15 Year (2021 to 2035) Levelized Prices (Nominal) @ 6.91% Discount Rate												
$/MWH	$32.69	$31.75	$0.94	$31.49	$22.91	$8.58	$30.16	$27.12	$3.04	$33.48	$30.12	$3.37

	Generation Profile_Baseload	Generation Profile_Wind*	Generation Profile_Solar Fixed	Generation Profile_Solar Tracking
on-peak Summer	19%	13%	31%	33%
on-peak Winter	37%	24%	52%	46%
off-peak Summer	15%	25%	7%	10%
off-peak Winter	29%	39%	10%	11%

Table 4
Natural Gas Price - Delivered to Plant
$/MMBtu

Year	West Side	IRP - Wyo NE
	(a)	(b)
2018	$3.23	$2.60
2019	$4.37	$2.43
2020	$2.33	$2.17
2021	$2.14	$2.13
2022	$2.28	$2.24
2023	$2.49	$2.41
2024	$2.84	$2.70
2025	$3.18	$3.06
2026	$3.44	$3.29
2027	$3.60	$3.44
2028	$3.86	$3.67
2029	$4.02	$3.81
2030	$4.16	$3.96
2031	$4.45	$4.27
2032	$4.68	$4.51
2033	$5.03	$4.89
2034	$5.17	$5.05
2035	$5.27	$5.20
2036	$5.35	$5.32
2037	$5.76	$5.72

Source

Official Forward Price Curve dated March 29 2019

Table 5
Electricity Market Prices
$/MWH

Year	Market Price $/MWH			
	HLH		LLH	
	Mid-Columbia	Palo Verde	Mid-Columbia	Palo Verde
	(a)	(b)	(c)	(d)
2018	$35.89	$40.61	$23.72	$27.50
2019	$46.34	$42.72	$39.32	$30.42
2020	$37.19	$35.98	$24.21	$25.48
2021	$41.01	$35.90	$27.27	$26.36
2022	$39.82	$37.24	$26.80	$28.03
2023	$36.73	$39.88	$25.34	$30.93
2024	$37.49	$44.06	$26.70	$34.46
2025	$41.21	$48.15	$29.21	$37.78
2026	$43.61	$51.15	$31.19	$40.56
2027	$44.41	$52.88	$32.12	$42.06
2028	$46.90	$55.99	$33.95	$44.88
2029	$49.13	$58.67	$35.83	$47.69
2030	$50.79	$61.08	$37.03	$49.69
2031	$53.15	$64.64	$39.04	$53.11
2032	$55.48	$67.91	$40.91	$56.19
2033	$59.90	$72.89	$44.13	$59.82
2034	$63.07	$75.39	$45.91	$62.07
2035	$67.19	$80.98	$47.71	$64.93
2036	$67.04	$81.98	$48.51	$66.83
2037	$77.20	$90.69	$53.17	$71.72

Source

Official Forward Price Curve dated March 29 2019

Table 6
Integration Costs
$/MWH

Year	System Balancing Integration Costs $/MWh	Wind Integration (Incremental) $/MWh	Tracking Solar Integration (Incremental) $/MWh	Fixed Solar Integraton Costs (Incremental) $/MWh
2016	$0.145	$0.429	$0.458	$0.458
2017	$0.15	$0.44	$0.47	$0.47
2018	$0.15	$0.45	$0.48	$0.48
2019	$0.15	$0.46	$0.49	$0.49
2020	$0.16	$0.47	$0.50	$0.50
2021	$0.16	$0.48	$0.51	$0.51
2022	$0.16	$0.49	$0.52	$0.52
2023	$0.17	$0.50	$0.53	$0.53
2024	$0.17	$0.51	$0.55	$0.55
2025	$0.18	$0.52	$0.56	$0.56
2026	$0.18	$0.54	$0.57	$0.57
2027	$0.19	$0.55	$0.59	$0.59
2028	$0.19	$0.56	$0.60	$0.60
2029	$0.19	$0.58	$0.61	$0.61
2030	$0.20	$0.59	$0.63	$0.63
2031	$0.20	$0.60	$0.64	$0.64
2032	$0.21	$0.62	$0.66	$0.66
2033	$0.21	$0.63	$0.67	$0.67
2034	$0.22	$0.65	$0.69	$0.69
2035	$0.22	$0.66	$0.70	$0.70
2036	$0.23	$0.67	$0.72	$0.72
2037	$0.23	$0.69	$0.74	$0.74
2038	$0.24	$0.70	$0.75	$0.75
2039	$0.24	$0.72	$0.77	$0.77
2040	$0.25	$0.74	$0.79	$0.79
2041	$0.25	$0.75	$0.81	$0.81
2042	$0.26	$0.77	$0.82	$0.82

Appendix 2

ROCKY MOUNTAIN POWER
AVOIDED COST CALCULATION

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

UTAH – APR 2019

ROCKY MOUNTAIN POWER
AVOIDED COST CALCULATION

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

UTAH – APRIL 2019

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 megawatt ("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/ Partial Displacement Differential Revenue Requirement ("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 30, 2019 quarterly avoided cost inputs compliance filing ("2019.Q1 Filing"). The following routine updates have been incorporated since the prior quarterly filing:

- Routine Generation and Regulation Initiative Decision Tool ("GRID") Update – Update of generic GRID model inputs to include the assumptions reflecting semi-annual update for the historical period ending December 2018.
- Qualifying Facility Queue – update of signed contract queue to reflect resources not included in the 2017 IRP Update.
- March 2019 Official Forward Price Curve – prices for electricity and natural gas.

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.

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

DESCRIPTION OF THE AVOIDED COST STUDY WORKPAPERS

"19-035-T07 RMP Appendix 1 - AC Study Summary 04-30-19" contains the summary of proposed avoided cost rates by QF type under the Commission-approved methodology.

Table 1 presents the timing of deferrable resources as listed in Table 8.1 of the Company's 2017 Integrated Resource Plan ("IRP") Update filing dated May 1, 2018. Table 1 shows the renewable resources the Company plans to acquire over the 20-year planning period. The 2017 IRP Update preferred portfolio does not include any thermal resources. The planned solar resources are located in Yakima, Utah South, and Southern Oregon. The planned wind resources include Energy Vision 2020 resources in Wyoming near Aeolus and near Trona, as well as proxy resources near Dave Johnston, near Goshen, and in Utah South.

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. Since the 2017 IRP Update preferred portfolio does not include any thermal resources, the sufficiency period covers the whole study period from 2018-2036, and a baseload QF displaces only Front Office Transactions ("FOTs"). **Table 2** shows the current queue of signed or terminated contracts after the 2017 IRP Update was prepared, which totals 861 MW nameplate capacity.

The deficiency period for a solar QF is based on the next deferrable IRP solar resource that has not been already displaced by signed solar contracts. Based on current signed contracts, an incremental solar QF partially displaces 2030 Yakima solar resources.

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, an incremental wind QF partially displaces 2030 Goshen wind resources.

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 2017 IRP Update utilized a 13 percent planning reserve margin.

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. **Table 6** provides the integration costs used in the filing, reflecting values from the 2017 IRP Update.

DESCRIPTION OF AVOIDED COST STUDY WORKPAPERS

Baseload QF

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

19-035-T07 RMP CONF Workpaper 1a - GRID AC Study Thermal 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2019-2028

19-035-T07 RMP CONF Workpaper 1b - GRID AC Study Thermal 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2029-2036

19-035-T07 RMP Wkpr - Avoided Cost Study-Thermal 04-30-19.xlsx:

- **Table 1:** summarizes the annual avoided energy costs based on GRID runs and shows the calculation of the annual avoided capacity costs. Since, the 2017 IRP Update preferred portfolio does not include any thermal resources, the avoided costs rates for a baseload QF reflects displacement of FOTs.
- **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.

19-035-T07 RMP Wkpr - QF Pricing Detail-Thermal 04-30-19.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:

19-035-T07 RMP CONF Workpaper 1a - GRID AC Study Wind 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2019-2028.

19-035-T07 RMP CONF Workpaper 1b - GRID AC Study Wind 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2029-2036

19-035-T07 RMP Wkpr - Avoided Cost Study-Wind 04-30-19.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, the avoided capacity costs are based on the avoided fixed costs of the next deferrable wind resource from 2017 IRP Update (that has not been already displaced by signed contracts). Specifically, the avoided capacity cost for a wind QF reflects avoided fixed costs of IRP Goshen wind resources in 2030. PacifiCorp retains the RECs generated starting in 2030.
- **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 2017 IRP Update 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.

19-035-T07 RMP Wkpr - QF Pricing Detail-Wind 04-30-19.xlsx: contains the calculations of the monthly 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 PV HLH and LLH market prices.

Tracking Solar QF

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

19-035-T07 RMP CONF Workpaper 1a - GRID AC Study Solar T 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2019-2028

19-035-T07 RMP CONF Workpaper 1b - GRID AC Study Solar T 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2029-2036

19-035-T07 RMP Wkpr - Avoided Cost Study-Solar T 04-24-19.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, the avoided capacity costs are based on the avoided fixed costs of the next deferrable solar resource from 2017 IRP Update (that has not been already displaced by signed contracts). Specifically, the avoided capacity cost for a solar

QF reflects avoided fixed costs of the 2030 Yakima solar resource from the 2017 IRP Update. PacifiCorp retains the RECs generated starting in 2030.

- **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 2017 IRP Update preferred portfolio. Total resource cost information included capital costs, and fixed and variable 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.

19-035-T07 RMP Wkpr - QF Pricing Detail-Solar T 04-30-19.xlsx: contains the calculations of the monthly HLH and LLH avoided cost rates for a tracking Solar QF by spreading total monthly avoided cost dollars (both energy and capacity) based on projected PV HLH and LLH market prices.

Fixed Solar QF

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

19-035-T07 RMP CONF Workpaper 1a - GRID AC Study Solar F 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2019-2028

19-035-T07 RMP CONF Workpaper 1b - GRID AC Study Solar F 04-30-19.xlsx: contains results of the GRID runs for the Base Case and the Avoided Cost Case for 2029-2036

19-035-T07 RMP Wkpr - Avoided Cost Study-Solar F 04-30-19.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, the avoided capacity costs are based on the avoided fixed costs of the next deferrable solar resource from 2017 IRP Update (that has not been already displaced by signed contracts). Specifically, the avoided capacity cost for a solar QF reflects avoided fixed costs of the 2030 Yakima solar resource from the 2017 IRP Update. PacifiCorp retains the RECs generated starting in 2030.
- **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 2017 IRP Update preferred portfolio. Total resource cost information

included capital costs, and fixed and variable 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.

19-035-T07 RMP Wkpr - QF Pricing Detail-Solar F 04-30-19.xlsx: contains the calculations of the monthly 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 PV HLH and LLH market prices.

CERTIFICATE OF SERVICE

Docket No. 19-035-T07
Advice 19-08

I hereby certify that on April 30, 2019, a true and correct copy of the foregoing was served by electronic mail to the following:

Utah Office of Consumer Services	
Michele Beck	mbeck@utah.gov
Division of Public Utilities	
Chris Parker	chrisparker@utah.gov dpudatarequest@utah.gov
Rocky Mountain Power	
Data Request Response Center	datarequest@pacificorp.com
Jana Saba	jana.saba@pacificorp.com; utahdockets@pacificorp.com

Jennifer Angell
Supervisor, Regulatory Operations