

Table - 2021 Supply Side Table (2020S)

Description		Resource Characteristics				Costs				Operating Characteristics				Environmental			
		Elevation (AFSL)	Net Capacity (MW)	Commercial Operation Year	Design Life (yrs)	Base Capital (\$/KW)	Demolition Cost (\$/KW)	Var O&M (\$/MWh)	Fixed O&M (\$/KW-yr)	Average Full Load Heat Rate (HHV Btu/KWh)/Efficiency	EFOR (%)	POR (%)	Water Consumed (Gal/MWh)	SO2 (lbs/MMBtu)	NOx (lbs/MMBtu)	Hg (lbs/TBTu)	CO2 (lbs/MMBtu)
Natural Gas	SCCT Aero x3	0	169	2025	30	1,463	10.00	7.44	0.00	9,350	2.6	3.9	43.6	0.0006	0.0090	0.255	117
Natural Gas	Intercooled SCCT Aero x2	0	227	2025	30	1,126	10.03	5.03	0.00	8,800	2.9	3.9	27.0	0.0006	0.0090	0.255	117
Natural Gas	SCCT Frame "F" x1	0	239	2025	35	699	10.09	14.16	0.00	9,913	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	Brownfield SCCT Frame "F" x1	0	239	2025	35	674	10.09	14.16	0.00	9,913	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	IC Recips x 6	0	111	2026	40	1,938	12.14	10.39	0.00	8,286	2.5	5.0	27.1	0.0006	0.0288	0.255	117
Natural Gas	CCCT Dry "H", 1x1	0	422	2026	40	1,396	10.05	1.77	0.00	6,343	2.5	3.8	23.6	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 1x1	0	51	2026	40	470	0.00	0.05	0.00	8,838	2.5	3.8	23.0	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", 2x1	0	842	2027	40	1,019	9.89	1.71	0.00	6,361	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 2x1	0	102	2027	40	357	0.00	0.05	0.00	8,665	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	Brownfield CCCT Dry "H", DF, 2x1	0	842	2027	40	1,019	9.89	1.08	0.00	6,610	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 1x1	0	615	2026	40	1,065	9.95	1.48	0.00	6,264	2.5	3.8	20.4	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 1x1	0	63	2026	40	397	0.00	0.06	0.00	8,769	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 2x1	0	1,232	2027	40	787	9.90	1.43	0.00	6,251	2.5	3.8	17.9	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 2x1	0	126	2027	40	309	0.00	0.06	0.00	8,704	2.5	3.8	17.8	0.0006	0.0072	0.255	117
Natural Gas	SCCT Aero x3	1,500	159	2025	30	1,551	13.91	7.89	0.00	9,362	2.6	3.9	43.6	0.0006	0.0090	0.255	117
Natural Gas	Intercooled SCCT Aero x2	1,500	215	2025	30	1,188	13.93	5.31	0.00	8,802	2.9	3.9	27.0	0.0006	0.0090	0.255	117
Natural Gas	SCCT Frame "F" x1	1,500	227	2025	35	738	13.84	14.94	0.00	9,916	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	Brownfield SCCT Frame "F" x1	1,500	227	2025	35	711	13.84	14.94	0.00	9,916	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	IC Recips x 6	1,500	111	2026	40	1,938	12.14	10.39	0.00	8,286	2.5	5.0	27.1	0.0006	0.0288	0.255	117
Natural Gas	CCCT Dry "H", 1x1	1,500	397	2026	40	1,484	13.80	1.88	0.00	6,384	2.5	3.8	23.6	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 1x1	1,500	51	2027	40	470	0.00	0.05	0.00	8,789	2.5	3.8	23.0	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", 2x1	1,500	797	2027	40	1,077	14.11	1.81	0.00	6,367	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 2x1	1,500	102	2026	40	357	0.00	0.05	0.00	8,713	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	Brownfield CCCT Dry "H", DF, 2x1	1,500	797	2027	40	1,077	14.11	1.14	0.00	6,633	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 1x1	1,500	582	2027	40	1,125	14.02	1.57	0.00	6,264	2.5	3.8	20.4	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 1x1	1,500	63	2027	40	397	0.00	0.06	0.00	8,816	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 2x1	1,500	1,166	2026	40	832	14.10	1.51	0.00	6,249	2.5	3.8	17.9	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 2x1	1,500	126	2026	40	309	0.00	0.06	0.00	8,742	2.5	3.8	17.8	0.0006	0.0072	0.255	117
Natural Gas	SCCT Aero x3	3,000	150	2025	30	1,645	11.24	8.37	0.00	9,380	2.6	3.9	43.6	0.0006	0.0090	0.255	117
Natural Gas	Intercooled SCCT Aero x2	3,000	203	2025	30	1,260	11.23	5.63	0.00	8,811	2.9	3.9	27.0	0.0006	0.0090	0.255	117
Natural Gas	SCCT Frame "F" x1	3,000	214	2025	35	779	11.25	15.79	0.00	9,928	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	Brownfield SCCT Frame "F" x1	3,000	214	2025	35	751	11.25	15.78	0.00	9,928	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	IC Recips x 6	3,000	111	2026	40	1,938	12.14	10.39	0.00	8,286	2.5	5.0	27.1	0.0006	0.0288	0.255	117
Natural Gas	CCCT Dry "H", 1x1	3,000	376	2026	40	1,569	11.30	1.99	0.00	6,387	2.5	3.8	23.6	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 1x1	3,000	51	2027	40	470	0.00	0.05	0.00	8,816	2.5	3.8	23.0	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", 2x1	3,000	750	2027	40	1,144	11.10	1.92	0.00	6,400	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 2x1	3,000	102	2026	40	357	0.00	0.05	0.00	8,756	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	Brownfield CCCT Dry "H", DF, 2x1	3,000	750	2026	40	1,144	11.10	1.21	0.00	6,682	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 1x1	3,000	550	2027	40	1,189	11.12	1.66	0.00	6,270	2.5	3.8	20.4	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 1x1	3,000	63	2027	40	397	0.00	0.06	0.00	8,837	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 2x1	3,000	1,103	2026	40	879	11.05	1.60	0.00	6,256	2.5	3.8	17.9	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 2x1	3,000	126	2026	40	309	0.00	0.06	0.00	8,763	2.5	3.8	17.8	0.0006	0.0072	0.255	117
Natural Gas	SCCT Aero x3	5,050	139	2025	30	1,777	12.14	9.04	0.00	9,400	2.6	3.9	43.6	0.0006	0.0090	0.255	117
Natural Gas	Intercooled SCCT Aero x2	5,050	187	2025	30	1,363	12.14	6.09	0.00	8,816	2.9	3.9	27.0	0.0006	0.0090	0.255	117
Natural Gas	SCCT Frame "F" x1	5,050	199	2025	35	841	12.14	17.04	0.00	9,936	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	Brownfield SCCT Frame "F" x1	5,050	199	2025	35	811	12.14	17.03	0.00	9,936	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	IC Recips x 6	5,050	111	2026	40	1,938	12.14	10.39	0.00	8,292	2.5	5.0	27.1	0.0006	0.0288	0.255	117
Natural Gas	CCCT Dry "H", 1x1	5,050	350	2026	40	1,687	12.14	2.14	0.00	6,362	2.5	3.8	23.6	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 1x1	5,050	51	2026	40	470	0.00	0.05	0.00	8,545	2.5	3.8	23.0	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", 2x1	5,050	686	2027	40	1,252	12.14	2.10	0.00	6,487	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "H", DF, 2x1	5,050	102	2027	40	358	0.00	0.05	0.00	9,470	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	Brownfield CCCT Dry "H", DF, 2x1	5,050	686	2027	40	1,251	12.14	1.33	0.00	6,874	2.5	3.8	19.8	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 1x1	5,050	504	2026	40	1,299	12.14	1.81	0.00	6,352	2.5	3.8	20.4	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 1x1	5,050	63	2026	40	397	0.00	0.06	0.00	9,452	2.5	3.8	20.1	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", 2x1	5,050	1,004	2027	40	966	12.14	1.76	0.00	6,373	2.5	3.8	17.9	0.0006	0.0072	0.255	117
Natural Gas	CCCT Dry "J", DF, 2x1	5,050	126	2027	40	309	0.00	0.06	0.00	9,456	2.5	3.8	17.8	0.0006	0.0072	0.255	117
Natural Gas	SCCT Aero x3	6,500	126	2025	30	1,957	13.37	9.96	0.00	9,314	2.6	3.9	43.6	0.0006	0.0090	0.255	117
Natural Gas	Intercooled SCCT Aero x2	6,500	179	2025	30	1,427	12.72	6.37	0.00	8,786	2.9	3.9	27.0	0.0006	0.0090	0.255	117
Natural Gas	SCCT Frame "F" x1	6,500	189	2025	35	886	12.80	17.95	0.00	9,930	2.7	3.9	28.4	0.0006	0.0090	0.255	117
Natural Gas	Brownfield SCCT Frame "F" x1	6,500	189	2025	35	854	12.80	17.95	0.00								

Table - 2021 Supply Side Table (2020S), Continued

Description		Resource Characteristics				Costs				Operating Characteristics				Environmental			
Fuel	Resource	Elevation (ASL)	Net Capacity (MW)	Commercial Operation Year	Design Life (yrs)	Base Capital (\$/kW)	Demolition Cost (\$/kW)	Var O&M (\$/MWh)	Fixed O&M (\$/kW-yr)	Average Full Load Heat Rate (HHV Btu/KWh)/Efficiency	EFOR (%)	POR (%)	Water Consumed (Gal/MWh)	SO2 (lbs/MMBtu)	NOx (lbs/MMBtu)	Hg (lbs/TBTu)	CO2 (lbs/MMBtu)
Coal	SCPC with CCS	4,500	526	2028	40	6,488	127.00	7.00	72.22	13,087	5.0	5.0	1,004	0.0085	0.070	0.022	20.5
Coal	IGCC with CCS	4,500	466	2028	40	6,282	60.00	11.77	58.20	10,823	8.0	7.0	394	0.0085	0.050	0.333	20.5
Coal	PC CCS retrofit @ 500 MW pre-retrofit basis	4,500	-115	2026	20	2,971	37.00	3.29	28.18	14,372	5.0	5.0	450	0.0050	0.070	1.200	20.5
Coal	SCPC with CCS	6,500	692	2028	40	7,348	127.00	7.58	67.09	13,242	5.0	5.0	1,004	0.0085	0.070	0.022	20.5
Coal	IGCC with CCS	6,500	456	2028	40	7,113	60.00	14.11	63.40	11,047	8.0	7.0	394	0.0085	0.050	0.333	20.5
Coal	PC CCS retrofit @ 500 MW pre-retrofit basis	6,500	-115	2026	20	2,971	37.00	3.29	28.18	14,372	5.0	5.0	450	0.0050	0.070	1.200	20.5
Geothermal	Blundell Dual Flash 90% CF	4,500	35	2021	40	5,708	127.00	1.16	103.85	n/a	5.0	5.0	10.0	n/a	n/a	n/a	n/a
Geothermal	Greenfield Binary 90% CF	4,500	43	2023	40	5,973	127.00	1.16	103.85	n/a	5.0	5.0	270	n/a	n/a	n/a	n/a
Geothermal	Generic Geothermal PPA 90% CF	4,500	30	2021	20	0		77.04	0.00	n/a	5.0			n/a	n/a	n/a	n/a
Wind	Pocatello, ID, 200 MW, CF: 37.1%	4,500	200	2024	30	1,365	12.50	0.00	24.74	N/A	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind	Arlington, OR, 200 MW, CF: 37.1%	1,500	200	2024	30	1,315	12.50	0.00	24.74	N/A	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind	Monticello, UT, 200 MW, CF: 29.5%	4,500	200	2024	30	1,306	12.50	0.00	24.74	N/A	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind	Medicine Bow, WY, 200 MW, CF: 43.6%	6,500	200	2024	30	1,356	12.50	0.00	24.74	N/A	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind	Goldendale, WA, 200 MW, CF: 37.1%	1,500	200	2024	30	1,390	12.50	0.00	24.74	N/A	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind + Storage	Pocatello, ID, 200 MW, CF: 37.1% + BESS: 50% pwr, 4 hours	4,500	200	2024	30	2,152	232.50	0.00	37.59	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind + Storage	Arlington, OR, 200 MW, CF: 37.1% + BESS: 50% pwr, 4 hours	1,500	200	2024	30	2,086	232.50	0.00	37.59	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind + Storage	Monticello, UT, 200 MW, CF: 29.5% + BESS: 50% pwr, 4 hours	4,500	200	2024	30	2,061	232.50	0.00	37.59	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind + Storage	Medicine Bow, WY, 200 MW, CF: 43.6% + BESS: 50% pwr, 4 hours	6,500	200	2024	30	2,136	232.50	0.00	37.59	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Wind + Storage	Goldendale, WA, 200 MW, CF: 37.1% + BESS: 50% pwr, 4 hours	1,500	200	2024	30	2,211	232.50	0.00	37.59	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Idah Falls, ID, 100 MW, CF: 26.1%	4,700	100	2023	25	1,429	35.00	0.00	16.20	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Idah Falls, ID, 200 MW, CF: 26.1%	4,700	200	2023	25	1,302	35.00	0.00	16.10	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Lakeview, OR, 100 MW, CF: 27.6%	4,800	100	2023	25	1,444	35.00	0.00	16.20	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Lakeview, OR, 200 MW, CF: 27.6%	4,800	200	2023	25	1,330	35.00	0.00	16.10	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Milford, UT, 100 MW, CF: 30.2%	5,000	100	2023	25	1,422	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Milford, UT, 200 MW, CF: 30.2%	5,000	200	2023	25	1,297	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Rock Springs, WY, 100 MW, CF: 27.9%	6,400	100	2023	25	1,423	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Rock Springs, WY, 200 MW, CF: 27.9%	6,400	200	2023	25	1,297	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Yakima, WA, 100 MW, CF: 24.2%	1,000	100	2023	25	1,486	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar	Yakima, WA, 200 MW, CF: 24.2%	1,000	200	2023	25	1,357	35.00	0.00	17.60	n/a	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Idah Falls, ID, 100 MW, CF: 26.1% + BESS: 50% pwr, 4 hours	4,700	100	2023	25	2,351	255.00	0.00	30.00	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Idah Falls, ID, 200 MW, CF: 26.1% + BESS: 50% pwr, 4 hours	4,700	200	2023	25	2,161	255.00	0.00	28.95	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Lakeview, OR, 100 MW, CF: 27.6% + BESS: 50% pwr, 4 hours	4,800	100	2023	25	2,329	255.00	0.00	30.00	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Lakeview, OR, 200 MW, CF: 27.6% + BESS: 50% pwr, 4 hours	4,800	200	2023	25	2,154	255.00	0.00	28.95	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Milford, UT, 100 MW, CF: 30.2% + BESS: 50% pwr, 4 hours	5,000	100	2023	25	2,283	255.00	0.00	31.40	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Milford, UT, 200 MW, CF: 30.2% + BESS: 50% pwr, 4 hours	5,000	200	2023	25	2,102	255.00	0.00	30.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Rock Springs, WY, 100 MW, CF: 27.9% + BESS: 50% pwr, 4 hours	6,400	100	2023	25	2,312	255.00	0.00	31.40	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Rock Springs, WY, 200 MW, CF: 27.9% + BESS: 50% pwr, 4 hours	6,400	200	2023	25	2,128	255.00	0.00	30.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Yakima, WA, 100 MW, CF: 24.2% + BESS: 50% pwr, 4 hours	1,000	100	2023	25	2,405	255.00	0.00	31.40	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Yakima, WA, 200 MW, CF: 24.2% + BESS: 50% pwr, 4 hours	1,000	200	2023	25	2,217	255.00	0.00	30.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Idah Falls, ID, 200 MW, CF: 26.1% + BESS: 50% pwr, 4 hours + 200 MW Wind	4,700	200	2023	25	3,395	267.50	0.00	82.95	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Lakeview, OR, 200 MW, CF: 27.6% + BESS: 50% pwr, 4 hours + 200 MW Wind	4,800	200	2023	25	3,424	267.50	0.00	82.95	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Milford, UT, 200 MW, CF: 30.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	5,000	200	2023	25	3,364	267.50	0.00	81.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Rock Springs, WY, 200 MW, CF: 27.9% + BESS: 50% pwr, 4 hours + 200 MW Wind	6,400	200	2023	25	3,364	267.50	0.00	81.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Solar + Storage	Yakima, WA, 200 MW, CF: 24.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	1,000	200	2023	25	3,424	267.50	0.00	81.45	85%	Included with CF	Included with CF	n/a	n/a	n/a	n/a	n/a
Storage	Pumped Hydro, Swan Lake	N/A	400	2027	60	3,095	2,600.00	0.00	12.50	78%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Goldendale	N/A	1,200	2028	60	2,833	2,600.00	0.00	12.50	78%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Seminole	N/A	750	2029	80	3,461	2,600.00	0.37	16.00	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Badger Mountain	N/A	500	2027	80	2,621	2,600.00	0.37	28.00	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Owyhee	N/A	600	2029	80	3,203	2,600.00	0.37	20.00	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Flat Canyon	N/A	300	2029	80	4,046	2,600.00	0.37	53.33	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Utah P52	N/A	500	2027	80	3,237	2,600.00	0.37	28.00	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Utah P53	N/A	600	2029	80	3,371	2,600.00	0.37	20.00	80%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Pumped Hydro, Banner Mountain	N/A	400	2028	50	3,276	2,600.00	0.00	28.50	81%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 150 MW, 600 MWh	N/A	150	2024	50	1,954	12.14	6.50	12.67	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 150 MW, 1200 MWh	N/A	150	2024	50	2,189	12.14	6.50	12.67	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 150 MW, 1800 MWh	N/A	150	2024	50	2,445	12.14	6.50	12.67	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 300 MW, 1200 MWh	N/A	300	2024	50	1,557	12.14	6.50	9.33	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 300 MW, 2400 MWh	N/A	300	2024	50	1,692	12.14	6.50	9.33	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 300 MW, 3600 MWh	N/A	300	2024	50	2,016	12.14	6.50	9.33	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 500 MW, 2000 MWh	N/A	500	2024	50	1,549	12.14	6.50	6.60	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 500 MW, 4000 MWh	N/A	500	2025	50	1,762	12.14	6.50	6.60	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Adiabatic CAES, Hydrostor, 500 MW, 6000 MWh	N/A	500	2025	50	1,930	12.14	6.50	6.60	60%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Li-Ion Battery, , 1 MW, 0.5 MWh	N/A	1	2023	20	1,948	55.00	Included in FOM	40.00	85%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Li-Ion Battery, , 1 MW, 1 MWh	N/A	1	2023	20	2,058	110.00	Included in FOM	50.00	85%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Li-Ion Battery, , 1 MW, 4 MWh	N/A	1	2023	20	3,167	440.00	Included in FOM	70.00	85%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Li-Ion Battery, , 1 MW, 8 MWh	N/A	1	2023	20	4,608	880.00	Included in FOM	100.00	85%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Li-Ion Battery, , 50 MW, 200 MWh	N/A	50	2023	20	1,828	440.00	Included in FOM	27.60	85%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Flow Battery, , 1 MW, 1 MWh	N/A	1	2023	20	4,719	12.14	Included in FOM	13.00	70%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Flow Battery, , 1 MW, 4 MWh	N/A	1	2023	20	5,051	12.14	Included in FOM	13.00	70%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Flow Battery, , 1 MW, 8 MWh	N/A	1	2023	20	7,268	12.14	Included in FOM	27.00	70%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Storage	Flow Battery, , 20 MW, 160 MWh	N/A	20	2023	20	4,686	12.14	Included in FOM	30.50	70%	0.0	0.0	n/a	0.0000	0.000	0.000	0
Nuclear	Small Modular Reactor	5,000	854	2028	6												

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)			Capital Cost \$/kW				Fixed Cost					
			Total Capital Cost 1/	Demolition Cost	Payment Factor 1/	Annual Payment (\$/kW-Yr)	Fixed O&M \$/kW-Yr					Total Fixed (\$/kW-Yr)
							O&M 1/	Capitalized Premium	O&M Capitalized 1/	Gas Transportation 1/	Total	
Resource Description	Modeled IRP	Elevation (AFSL)										
SCCT Aero x3	No	0	\$1,463	\$10.00	7.497%	\$110.43	\$0.00	1.262%	\$0.00	\$31.94	\$31.94	\$142.37
Intercooled SCCT Aero x2	No	0	\$1,126	\$10.03	7.497%	\$85.14	\$0.00	1.135%	\$0.00	\$30.03	\$30.03	\$115.17
SCCT Frame "F" x1	No	0	\$699	\$10.09	7.049%	\$49.97	\$0.00	0.273%	\$0.00	\$33.77	\$33.77	\$83.74
Brownfield SCCT Frame "F" x1	No	0	\$674	\$10.09	7.049%	\$48.20	\$0.00	0.273%	\$0.00	\$33.77	\$33.77	\$81.97
IC Recips x 6	No	0	\$1,938	\$12.14	7.049%	\$137.45	\$0.00	0.136%	\$0.00	\$28.47	\$28.47	\$165.92
CCCT Dry "H", 1x1	No	0	\$1,396	\$10.05	6.886%	\$96.84	\$0.00	0.146%	\$0.00	\$23.57	\$23.57	\$120.41
CCCT Dry "H", DF, 1x1	No	0	\$470	\$0.00	6.886%	\$32.34	\$0.00	0.000%	\$0.00	\$23.57	\$23.57	\$55.91
CCCT Dry "H", 2x1	No	0	\$1,019	\$9.89	6.886%	\$70.86	\$0.00	0.146%	\$0.00	\$23.62	\$23.62	\$94.48
CCCT Dry "H", DF, 2x1	No	0	\$357	\$0.00	6.886%	\$24.60	\$0.00	0.000%	\$0.00	\$23.62	\$23.62	\$48.22
Brownfield CCCT Dry "H", DF, 2x1	No	0	\$1,019	\$9.89	6.886%	\$70.83	\$0.00	0.000%	\$0.00	\$23.36	\$23.36	\$94.19
CCCT Dry "J", 1x1	No	0	\$1,065	\$9.95	6.886%	\$73.99	\$0.00	0.000%	\$0.00	\$23.36	\$23.36	\$97.35
CCCT Dry "J", DF, 1x1	No	0	\$397	\$0.00	6.886%	\$27.36	\$0.00	0.000%	\$0.00	\$23.36	\$23.36	\$50.73
CCCT Dry "J", 2x1	No	0	\$787	\$9.90	6.886%	\$54.88	\$0.00	0.146%	\$0.00	\$23.36	\$23.36	\$78.25
CCCT Dry "J", DF, 2x1	No	0	\$309	\$0.00	6.886%	\$21.30	\$0.00	0.000%	\$0.00	\$23.36	\$23.36	\$44.66
SCCT Aero x3	No	1,500	\$1,551	\$13.91	7.497%	\$117.36	\$0.00	1.262%	\$0.00	\$31.76	\$31.76	\$149.12
Intercooled SCCT Aero x2	No	1,500	\$1,188	\$13.93	7.497%	\$90.12	\$0.00	1.135%	\$0.00	\$29.91	\$29.91	\$120.03
SCCT Frame "F" x1	No	1,500	\$738	\$13.84	7.049%	\$52.98	\$0.00	0.273%	\$0.00	\$33.71	\$33.71	\$86.68
Brownfield SCCT Frame "F" x1	No	1,500	\$711	\$13.84	7.049%	\$51.11	\$0.00	0.273%	\$0.00	\$33.71	\$33.71	\$84.82
IC Recips x 6	No	1,500	\$1,938	\$12.14	7.049%	\$137.45	\$0.00	0.136%	\$0.00	\$28.47	\$28.47	\$165.92
CCCT Dry "H", 1x1	No	1,500	\$1,484	\$13.80	6.886%	\$103.13	\$0.00	0.146%	\$0.00	\$23.37	\$23.37	\$126.49
CCCT Dry "H", DF, 1x1	No	1,500	\$470	\$0.00	6.886%	\$32.35	\$0.00	0.000%	\$0.00	\$23.37	\$23.37	\$55.71
CCCT Dry "H", 2x1	No	1,500	\$1,077	\$14.11	6.886%	\$75.15	\$0.00	0.146%	\$0.00	\$23.41	\$23.41	\$98.56
CCCT Dry "H", DF, 2x1	No	1,500	\$357	\$0.00	6.886%	\$24.60	\$0.00	0.000%	\$0.00	\$23.41	\$23.41	\$48.01
Brownfield CCCT Dry "H", DF, 2x1	No	1,500	\$1,077	\$14.11	6.886%	\$75.11	\$0.00	0.000%	\$0.00	\$23.17	\$23.17	\$98.29
CCCT Dry "J", 1x1	No	1,500	\$1,125	\$14.02	6.886%	\$78.43	\$0.00	0.000%	\$0.00	\$23.17	\$23.17	\$101.61
CCCT Dry "J", DF, 1x1	No	1,500	\$397	\$0.00	6.886%	\$27.37	\$0.00	0.000%	\$0.00	\$23.17	\$23.17	\$50.54
CCCT Dry "J", 2x1	No	1,500	\$832	\$14.10	6.886%	\$58.24	\$0.00	0.146%	\$0.00	\$23.17	\$23.17	\$81.41
CCCT Dry "J", DF, 2x1	No	1,500	\$309	\$0.00	6.886%	\$21.30	\$0.00	0.000%	\$0.00	\$23.17	\$23.17	\$44.47
SCCT Aero x3	No	3,000	\$1,645	\$11.24	7.497%	\$124	\$0.00	1.262%	\$0.00	\$16.94	\$16.94	\$141.12
Intercooled SCCT Aero x2	No	3,000	\$1,260	\$11.23	7.497%	\$95	\$0.00	1.135%	\$0.00	\$15.94	\$15.94	\$111.26
SCCT Frame "F" x1	No	3,000	\$779	\$11.25	7.049%	\$56	\$0.00	0.273%	\$0.00	\$17.98	\$17.98	\$73.70
Brownfield SCCT Frame "F" x1	No	3,000	\$751	\$11.25	7.049%	\$54	\$0.00	0.273%	\$0.00	\$17.98	\$17.98	\$71.73
IC Recips x 6	No	3,000	\$1,938	\$12.14	7.049%	\$137.45	\$0.00	0.136%	\$0.00	\$15.18	\$15.18	\$152.62
CCCT Dry "H", 1x1	No	3,000	\$1,569	\$11.30	6.886%	\$108.80	\$0.00	0.146%	\$0.00	\$23.28	\$23.28	\$132.08
CCCT Dry "H", DF, 1x1	No	3,000	\$470	\$0.00	6.886%	\$32.35	\$0.00	0.000%	\$0.00	\$23.28	\$23.28	\$55.62
CCCT Dry "H", 2x1	No	3,000	\$1,144	\$11.10	6.886%	\$79.55	\$0.00	0.146%	\$0.00	\$12.43	\$12.43	\$91.98
CCCT Dry "H", DF, 2x1	No	3,000	\$357	\$0.00	6.886%	\$24.60	\$0.00	0.000%	\$0.00	\$12.43	\$12.43	\$37.03
Brownfield CCCT Dry "H", DF, 2x1	No	3,000	\$1,144	\$11.10	6.886%	\$79.51	\$0.00	0.000%	\$0.00	\$12.27	\$12.27	\$91.78
CCCT Dry "J", 1x1	No	3,000	\$1,189	\$11.12	6.886%	\$82.65	\$0.00	0.000%	\$0.00	\$12.27	\$12.27	\$94.92
CCCT Dry "J", DF, 1x1	No	3,000	\$397	\$0.00	6.886%	\$27.37	\$0.00	0.000%	\$0.00	\$12.27	\$12.27	\$39.64
CCCT Dry "J", 2x1	No	3,000	\$879	\$11.05	6.886%	\$61.29	\$0.00	0.146%	\$0.00	\$12.28	\$12.28	\$73.57
CCCT Dry "J", DF, 2x1	No	3,000	\$309	\$0.00	6.886%	\$21.30	\$0.00	0.000%	\$0.00	\$12.28	\$12.28	\$33.58
SCCT Aero x3	No	5,050	\$1,777	\$12.14	7.497%	\$134.18	\$0.00	1.262%	\$0.00	\$14.06	\$14.06	\$148.23
Intercooled SCCT Aero x2	Yes	5,050	\$1,363	\$12.14	7.497%	\$103.10	\$0.00	1.135%	\$0.00	\$13.22	\$13.22	\$116.32
SCCT Frame "F" x1	Yes	5,050	\$841	\$12.14	7.049%	\$60.13	\$0.00	0.273%	\$0.00	\$14.93	\$14.93	\$75.07
Brownfield SCCT Frame "F" x1	Yes	5,050	\$811	\$12.14	7.049%	\$58.00	\$0.00	0.273%	\$0.00	\$14.93	\$14.93	\$72.94
IC Recips x 6	Yes	5,050	\$1,938	\$12.14	7.049%	\$137.45	\$0.00	0.136%	\$0.00	\$12.61	\$12.61	\$150.06
CCCT Dry "H", 1x1	Yes	5,050	\$1,687	\$12.14	6.886%	\$116.98	\$0.00	0.146%	\$0.00	\$9.91	\$9.91	\$126.89
CCCT Dry "H", DF, 1x1	Yes	5,050	\$470	\$0.00	6.886%	\$32.35	\$0.00	0.000%	\$0.00	\$9.91	\$9.91	\$42.26
CCCT Dry "H", 2x1	No	5,050	\$1,252	\$12.14	6.886%	\$87.04	\$0.00	0.146%	\$0.00	\$9.93	\$9.93	\$96.97
CCCT Dry "H", DF, 2x1	No	5,050	\$358	\$0.00	6.886%	\$24.63	\$0.00	0.000%	\$0.00	\$9.93	\$9.93	\$34.56
Brownfield CCCT Dry "H", DF, 2x1	Yes	5,050	\$1,251	\$12.14	6.886%	\$87.00	\$0.00	0.000%	\$0.00	\$9.84	\$9.84	\$96.84
CCCT Dry "J", 1x1	Yes	5,050	\$1,299	\$12.14	6.886%	\$90.28	\$0.00	0.000%	\$0.00	\$9.84	\$9.84	\$100.13
CCCT Dry "J", DF, 1x1	Yes	5,050	\$397	\$0.00	6.886%	\$27.36	\$0.00	0.000%	\$0.00	\$9.84	\$9.84	\$37.21
CCCT Dry "J", 2x1	No	5,050	\$966	\$12.14	6.886%	\$67.34	\$0.00	0.146%	\$0.00	\$9.85	\$9.85	\$77.19
CCCT Dry "J", DF, 2x1	No	5,050	\$309	\$0.00	6.886%	\$21.29	\$0.00	0.000%	\$0.00	\$9.85	\$9.85	\$31.15
SCCT Aero x3	No	6,500	\$1,957	\$13.37	7.497%	\$147.74	\$0.00	1.262%	\$0.00	\$9.13	\$9.13	\$156.86
Intercooled SCCT Aero x2	Yes	6,500	\$1,427	\$12.72	7.497%	\$107.96	\$0.00	1.135%	\$0.00	\$8.62	\$8.62	\$116.58
SCCT Frame "F" x1	Yes	6,500	\$886	\$12.80	7.049%	\$63.37	\$0.00	0.273%	\$0.00	\$9.70	\$9.70	\$73.06
Brownfield SCCT Frame "F" x1	Yes	6,500	\$854	\$12.80	7.049%	\$61.12	\$0.00	0.273%	\$0.00	\$9.70	\$9.70	\$70.82
IC Recips x 6	Yes	6,500	\$1,937	\$12.14	7.049%	\$137.42	\$0.00	0.136%	\$0.00	\$8.24	\$8.24	\$145.66
CCCT Dry "H", 1x1	Yes	6,500	\$1,761	\$12.68	6.886%	\$122.11	\$0.00	0.146%	\$0.00	\$20.66	\$20.66	\$142.77

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)			Capital Cost \$/kW				Fixed Cost					
							Fixed O&M \$/kW-Yr					
Resource Description	Modeled IRP	Elevation (AFSL)	Total Capital Cost 1/	Demolition Cost	Payment Factor 1/	Annual Payment (\$/kW-Yr)	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Gas Transportation 1/	Total	Total Fixed (\$/kW-Yr)
CCCT Dry "H", DF, 1x1	Yes	6,500	\$470	\$0.00	6.886%	\$32.35	\$0.00	0.000%	\$0.00	\$20.66	\$20.66	\$53.01
CCCT Dry "H", 2x1	No	6,500	\$1,283	\$12.45	6.886%	\$89.23	\$0.00	0.146%	\$0.00	\$6.71	\$6.71	\$95.94
CCCT Dry "H", DF, 2x1	No	6,500	\$357	\$0.00	6.886%	\$24.61	\$0.00	0.000%	\$0.00	\$6.71	\$6.71	\$31.32
Brownfield CCCT Dry "H", DF, 2x1	Yes	6,500	\$1,283	\$12.45	6.886%	\$89.18	\$0.00	0.000%	\$0.00	\$6.62	\$6.62	\$95.80
CCCT Dry "J", 1x1	Yes	6,500	\$1,337	\$12.50	6.886%	\$92.91	\$0.00	0.000%	\$0.00	\$6.62	\$6.62	\$99.53
CCCT Dry "J", DF, 1x1	Yes	6,500	\$397	\$0.00	6.886%	\$27.36	\$0.00	0.000%	\$0.00	\$6.62	\$6.62	\$33.98
CCCT Dry "J", 2x1	No	6,500	\$988	\$12.43	6.886%	\$68.90	\$0.00	0.146%	\$0.00	\$6.62	\$6.62	\$75.53
CCCT Dry "J", DF, 2x1	No	6,500	\$309	\$0.00	6.886%	\$21.30	\$0.00	0.000%	\$0.00	\$6.62	\$6.62	\$27.92
SCPC with CCS	No	4,500	\$6,488	\$127.00	6.822%	\$451.29	\$72.22	5.541%	\$4.00	\$0.00	\$76.23	\$527.52
IGCC with CCS	No	4,500	\$6,282	\$60.00	7.389%	\$468.60	\$58.20	0.000%	\$0.00	\$0.00	\$58.20	\$526.80
PC CCS retrofit @ 500 MW pre-retrofit basis	Yes	4,500	\$2,971	\$37.00	6.822%	\$205.19	\$28.18	5.541%	\$1.56	\$0.00	\$29.74	\$234.92
SCPC with CCS	No	6,500	\$7,348	\$127.00	6.822%	\$509.92	\$67.09	5.541%	\$3.72	\$0.00	\$70.80	\$580.72
IGCC with CCS	No	6,500	\$7,113	\$60.00	7.389%	\$530.01	\$63.40	0.000%	\$0.00	\$0.00	\$63.40	\$593.41
PC CCS retrofit @ 500 MW pre-retrofit basis	Yes	6,500	\$2,971	\$37.00	6.822%	\$205.19	\$28.18	5.541%	\$1.56	\$0.00	\$29.74	\$234.92
Blundell Dual Flash 90% CF	Yes	4,500	\$5,708	\$127.00	6.273%	\$366.02	\$103.85	0.875%	\$0.91	\$0.00	\$104.76	\$470.77
Greenfield Binary 90% CF	Yes	4,500	\$5,973	\$127.00	6.273%	\$382.70	\$103.85	0.000%	\$0.00	\$0.00	\$103.85	\$486.55
Generic Geothermal PPA 90% CF	Yes	4,500	\$0	\$0.00	6.273%	\$0.00	\$0.00	0.000%	\$0.00	\$0.00	\$0.00	\$0.00
Pocatello, ID, 200 MW Wind, CF: 37.1% (100% PTC)	Yes	4,500	\$1,365	\$12.50	6.979%	\$96.14	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$120.88
Arlington, OR, 200 MW Wind, CF: 37.1% (100% PTC)	Yes	1,500	\$1,315	\$12.50	6.979%	\$92.67	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$117.41
Monticello, UT, 200 MW Wind, CF: 29.5% (100% PTC)	Yes	4,500	\$1,306	\$12.50	6.979%	\$92.05	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$116.79
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (100%PTC)	Yes	6,500	\$1,356	\$12.50	6.979%	\$95.54	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$120.28
Goldendale, WA, 200 MW Wind, CF: 37.1% (100% PTC)	Yes	1,500	\$1,390	\$12.50	6.979%	\$97.89	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$122.63
Pocatello, ID, 200 MW Wind, CF: 37.1% (60% PTC)	Yes	4,500	\$1,365	\$12.50	6.979%	\$96.14	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$120.88
Arlington, OR, 200 MW Wind, CF: 37.1% (60% PTC)	Yes	1,500	\$1,315	\$12.50	6.979%	\$92.67	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$117.41
Monticello, UT, 200 MW Wind, CF: 29.5% (60% PTC)	Yes	4,500	\$1,306	\$12.50	6.979%	\$92.05	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$116.79
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (60% PTC)	Yes	6,500	\$1,356	\$12.50	6.979%	\$95.54	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$120.28
Goldendale, WA, 200 MW Wnd, CF: 37.1% (60% PTC)	Yes	1,500	\$1,390	\$12.50	6.979%	\$97.89	\$24.74	0.000%	\$0.00	\$0.00	\$24.74	\$122.63
Pocatello, ID, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	Yes	4,500	\$2,152	\$232.50	6.979%	\$166.45	\$37.59	2.902%	\$1.09	\$0.00	\$38.68	\$205.13
Arlington, OR, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	Yes	1,500	\$2,086	\$232.50	6.979%	\$161.82	\$37.59	2.902%	\$1.09	\$0.00	\$38.68	\$200.50
Monticello, UT, 200 MW Wind, CF: 29.5% + BESS: 50% pwr, 4 hours	Yes	4,500	\$2,061	\$232.50	6.979%	\$160.06	\$37.59	2.902%	\$1.09	\$0.00	\$38.68	\$198.74
Medicine Bow, WY, 200 MW Wind, CF: 43.6% + BESS: 50% pwr, 4 hours	Yes	6,500	\$2,136	\$232.50	6.979%	\$165.29	\$37.59	2.902%	\$1.09	\$0.00	\$38.68	\$203.97
Goldendale, WA, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	Yes	1,500	\$2,211	\$232.50	6.979%	\$170.52	\$37.59	2.902%	\$1.09	\$0.00	\$38.68	\$209.20
Idaho Falls, ID, 100 MW Solar, CF: 26.1% (30% ITC)	Yes	4,700	\$1,429	\$35.00	6.839%	\$100.09	\$16.20	1.379%	\$0.22	\$0.00	\$16.42	\$116.52
Idaho Falls, ID, 200 MW Solar, CF: 26.1% (30% ITC)	Yes	4,700	\$1,302	\$35.00	6.839%	\$91.44	\$16.10	1.379%	\$0.22	\$0.00	\$16.32	\$107.77
Lakeview, OR, 100 MW Solar, CF: 27.6% (30% ITC)	Yes	4,800	\$1,444	\$35.00	6.839%	\$101.18	\$16.20	1.379%	\$0.22	\$0.00	\$16.42	\$117.61
Lakeview, OR, 200 MW Solar, CF: 27.6% (30% ITC)	Yes	4,800	\$1,330	\$35.00	6.839%	\$93.38	\$16.10	1.379%	\$0.22	\$0.00	\$16.32	\$109.70
Milford, UT, 100 MW Solar, CF: 30.2% (30% ITC)	Yes	5,000	\$1,422	\$35.00	6.839%	\$99.67	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$117.51
Milford, UT, 200 MW Solar, CF: 30.2% (30% ITC)	Yes	5,000	\$1,297	\$35.00	6.839%	\$91.11	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.95
Rock Springs, WY, 100 MW Solar, CF: 27.9% (30% ITC)	Yes	6,400	\$1,423	\$35.00	6.839%	\$99.70	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$117.55
Rock Springs, WY, 200 MW Solar, CF: 27.9% (30% ITC)	Yes	6,400	\$1,297	\$35.00	6.839%	\$91.07	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.91
Yakima, WA, 100 MW Solar, CF: 24.2% (30% ITC)	Yes	1,000	\$1,486	\$35.00	6.839%	\$104.04	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$121.88
Yakima, WA, 200 MW Solar, CF: 24.2% (30% ITC)	Yes	1,000	\$1,357	\$35.00	6.839%	\$95.20	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$113.04
Idaho Falls, ID, 100 MW Solar, CF: 26.1% (10% ITC)	Yes	4,700	\$1,429	\$35.00	6.839%	\$100.09	\$16.20	1.379%	\$0.22	\$0.00	\$16.42	\$116.52
Idaho Falls, ID, 200 MW Solar, CF: 26.1% (10% ITC)	Yes	4,700	\$1,302	\$35.00	6.839%	\$91.44	\$16.10	1.379%	\$0.22	\$0.00	\$16.32	\$107.77
Lakeview, OR, 100 MW Solar, CF: 27.6% (10% ITC)	Yes	4,800	\$1,444	\$35.00	6.839%	\$101.18	\$16.20	1.379%	\$0.22	\$0.00	\$16.42	\$117.61
Lakeview, OR, 200 MW Solar, CF: 27.6% (10% ITC)	Yes	4,800	\$1,330	\$35.00	6.839%	\$93.38	\$16.10	1.379%	\$0.22	\$0.00	\$16.32	\$109.70
Milford, UT, 100 MW Solar, CF: 30.2% (10% ITC)	Yes	5,000	\$1,422	\$35.00	6.839%	\$99.67	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$117.51
Milford, UT, 200 MW Solar, CF: 30.2% (10% ITC)	Yes	5,000	\$1,297	\$35.00	6.839%	\$91.11	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.95
Rock Springs, WY, 100 MW Solar, CF: 27.9% (10% ITC)	Yes	6,400	\$1,423	\$35.00	6.839%	\$99.70	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$117.55
Rock Springs, WY, 200 MW Solar, CF: 27.9% (10% ITC)	Yes	6,400	\$1,297	\$35.00	6.839%	\$91.07	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.91
Yakima, WA, 100 MW Solar, CF: 24.2% (10% ITC)	Yes	1,000	\$1,486	\$35.00	6.839%	\$104.04	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$121.88
Yakima, WA, 200 MW Solar, CF: 24.2% (10% ITC)	Yes	1,000	\$1,357	\$35.00	6.839%	\$95.20	\$17.60	1.379%	\$0.24	\$0.00	\$17.84	\$113.04

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)			Capital Cost \$/kW				Fixed Cost					
							Fixed O&M \$/kW-Yr					
Resource Description	Modeled IRP	Elevation (AFSL)	Total Capital Cost 1/	Demolition Cost	Payment Factor 1/	Annual Payment (\$/kW-Yr)	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Gas Transportation 1/	Total	Total Fixed (\$/kW-Yr)
Idaho Falls, ID, 100 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	4,700	\$2,351	\$255.00	6.839%	\$178.25	\$30.00	1.379%	\$0.41	\$0.00	\$30.41	\$208.66
Idaho Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	4,700	\$2,161	\$255.00	6.839%	\$165.25	\$28.95	1.379%	\$0.40	\$0.00	\$29.35	\$194.60
Lakeview, OR, 100 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	4,800	\$2,329	\$255.00	6.839%	\$176.71	\$30.00	1.379%	\$0.41	\$0.00	\$30.41	\$207.12
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	4,800	\$2,154	\$255.00	6.839%	\$164.74	\$28.95	1.379%	\$0.40	\$0.00	\$29.35	\$194.09
Milford, UT, 100 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	5,000	\$2,283	\$255.00	6.839%	\$173.58	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$205.41
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	5,000	\$2,102	\$255.00	6.839%	\$161.21	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$192.08
Rock Springs, WY, 100 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	6,400	\$2,312	\$255.00	6.839%	\$175.57	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$207.40
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	6,400	\$2,128	\$255.00	6.839%	\$163.01	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$193.88
Yakima, WA, 100 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	1,000	\$2,405	\$255.00	6.839%	\$181.91	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$213.74
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	1,000	\$2,217	\$255.00	6.839%	\$169.05	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$199.92
Idaho Falls, ID, 100 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	4,700	\$2,351	\$255.00	6.839%	\$178.25	\$30.00	1.379%	\$0.41	\$0.00	\$30.41	\$208.66
Idaho Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	4,700	\$2,161	\$255.00	6.839%	\$165.25	\$28.95	1.379%	\$0.40	\$0.00	\$29.35	\$194.60
Lakeview, OR, 100 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	4,800	\$2,329	\$255.00	6.839%	\$176.71	\$30.00	1.379%	\$0.41	\$0.00	\$30.41	\$207.12
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	4,800	\$2,154	\$255.00	6.839%	\$164.74	\$28.95	1.379%	\$0.40	\$0.00	\$29.35	\$194.09
Milford, UT, 100 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	5,000	\$2,283	\$255.00	6.839%	\$173.58	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$205.41
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	5,000	\$2,102	\$255.00	6.839%	\$161.21	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$192.08
Rock Springs, WY, 100 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	6,400	\$2,312	\$255.00	6.839%	\$175.57	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$207.40
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	6,400	\$2,128	\$255.00	6.839%	\$163.01	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$193.88
Yakima, WA, 100 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	1,000	\$2,405	\$255.00	6.839%	\$181.91	\$31.40	1.379%	\$0.43	\$0.00	\$31.83	\$213.74
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (10% ITC)	Yes	1,000	\$2,217	\$255.00	6.839%	\$169.05	\$30.45	1.379%	\$0.42	\$0.00	\$30.87	\$199.92
Idah Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours + 200 MW Wind	No	4,700	\$3,395	\$267.50	6.839%	\$250.50	\$82.95	1.379%	\$1.14	\$0.00	\$84.09	\$334.59
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours + 200 MW Wind	No	4,800	\$3,424	\$267.50	6.839%	\$252.44	\$82.95	1.379%	\$1.14	\$0.00	\$84.09	\$336.53
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	No	5,000	\$3,364	\$267.50	6.839%	\$248.37	\$81.45	1.379%	\$1.12	\$0.00	\$82.57	\$330.95
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours + 200 MW Wind	No	6,400	\$3,364	\$267.50	6.839%	\$248.33	\$81.45	1.379%	\$1.12	\$0.00	\$82.57	\$330.90
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	No	1,000	\$3,424	\$267.50	6.839%	\$252.46	\$81.45	1.379%	\$1.12	\$0.00	\$82.57	\$335.04
Pumped Hydro, Swan Lake, 3600 MWh	Yes	N/A	\$3,095	\$2,600.00	6.251%	\$356.00	\$12.50	0.000%	\$0.00	\$0.00	\$12.50	\$368.50
Pumped Hydro, Goldendale, 14400 MWh	Yes	N/A	\$2,833	\$2,600.00	6.251%	\$339.65	\$12.50	0.000%	\$0.00	\$0.00	\$12.50	\$352.15
Pumped Hydro, Seminoc, 7500 MWh	Yes	N/A	\$3,461	\$2,600.00	6.111%	\$370.37	\$16.00	0.000%	\$0.00	\$0.00	\$16.00	\$386.37
Pumped Hydro, Badger Mountain, 4000 MWh	Yes	N/A	\$2,621	\$2,600.00	6.111%	\$319.02	\$28.00	0.000%	\$0.00	\$0.00	\$28.00	\$347.02
Pumped Hydro, Owyhee, 4800 MWh	Yes	N/A	\$3,203	\$2,600.00	6.111%	\$354.57	\$20.00	0.000%	\$0.00	\$0.00	\$20.00	\$374.57
Pumped Hydro, Flat Canyon, 1800 MWh	Yes	N/A	\$4,046	\$2,600.00	6.111%	\$406.12	\$53.33	0.000%	\$0.00	\$0.00	\$53.33	\$459.46
Pumped Hydro, Utah PS2, 4000 MWh	Yes	N/A	\$3,237	\$2,600.00	6.111%	\$356.68	\$28.00	0.000%	\$0.00	\$0.00	\$28.00	\$384.68
Pumped Hydro, Utah PS3, 4800 MWh	Yes	N/A	\$3,371	\$2,600.00	6.111%	\$364.87	\$20.00	0.000%	\$0.00	\$0.00	\$20.00	\$384.87
Pumped Hydro, Banner Mountain, 3400 MWh	Yes	N/A	\$3,276	\$2,600.00	6.479%	\$380.66	\$28.50	0.000%	\$0.00	\$0.00	\$28.50	\$409.16
Adiabatic CAES, Hydrostor, 150 MW, 600 MWh	No	N/A	\$1,954	\$12.14	7.497%	\$147.40	\$12.67	0.000%	\$0.00	\$0.00	\$12.67	\$160.06
Adiabatic CAES, Hydrostor, 150 MW, 1200 MWh	No	N/A	\$2,189	\$12.14	7.497%	\$165.01	\$12.67	0.000%	\$0.00	\$0.00	\$12.67	\$177.67
Adiabatic CAES, Hydrostor, 150 MW, 1800 MWh	No	N/A	\$2,445	\$12.14	7.497%	\$184.22	\$12.67	0.000%	\$0.00	\$0.00	\$12.67	\$196.89
Adiabatic CAES, Hydrostor, 300 MW, 1200 MWh	No	N/A	\$1,557	\$12.14	7.497%	\$117.65	\$9.33	0.000%	\$0.00	\$0.00	\$9.33	\$126.98
Adiabatic CAES, Hydrostor, 300 MW, 2400 MWh	No	N/A	\$1,692	\$12.14	7.497%	\$127.79	\$9.33	0.000%	\$0.00	\$0.00	\$9.33	\$137.12
Adiabatic CAES, Hydrostor, 300 MW, 3600 MWh	No	N/A	\$2,016	\$12.14	7.497%	\$152.05	\$9.33	0.000%	\$0.00	\$0.00	\$9.33	\$161.38
Adiabatic CAES, Hydrostor, 500 MW, 2000 MWh	Yes	N/A	\$1,549	\$12.14	7.497%	\$117.06	\$6.60	0.000%	\$0.00	\$0.00	\$6.60	\$123.66
Adiabatic CAES, Hydrostor, 500 MW, 4000 MWh	Yes	N/A	\$1,762	\$12.14	7.497%	\$132.99	\$6.60	0.000%	\$0.00	\$0.00	\$6.60	\$139.59
Adiabatic CAES, Hydrostor, 500 MW, 6000 MWh	Yes	N/A	\$1,930	\$12.14	7.497%	\$145.64	\$6.60	0.000%	\$0.00	\$0.00	\$6.60	\$152.24
Li-Ion Battery, , 1 MW, 0.5 MWh	No	N/A	\$1,948	\$55.00	8.676%	\$173.74	\$40.00	0.000%	\$0.00	\$0.00	\$40.00	\$213.74
Li-Ion Battery, , 1 MW, 1 MWh	No	N/A	\$2,058	\$110.00	8.676%	\$188.13	\$50.00	0.000%	\$0.00	\$0.00	\$50.00	\$238.13
Li-Ion Battery, , 1 MW, 4 MWh	No	N/A	\$3,167	\$440.00	8.676%	\$312.93	\$70.00	0.000%	\$0.00	\$0.00	\$70.00	\$382.93
Li-Ion Battery, , 1 MW, 8 MWh	No	N/A	\$4,608	\$880.00	8.676%	\$476.12	\$100.00	0.000%	\$0.00	\$0.00	\$100.00	\$576.12
Li-Ion Battery, , 50 MW, 200 MWh	Yes	N/A	\$1,828	\$440.00	8.676%	\$196.74	\$27.60	0.000%	\$0.00	\$0.00	\$27.60	\$224.34
Flow Battery, , 1 MW, 1 MWh	No	N/A	\$4,719	\$12.14	8.676%	\$410.44	\$13.00	0.000%	\$0.00	\$0.00	\$13.00	\$423.44
Flow Battery, , 1 MW, 4 MWh	No	N/A	\$5,051	\$12.14	8.676%	\$439.29	\$13.00	0.000%	\$0.00	\$0.00	\$13.00	\$452.29
Flow Battery, , 1 MW, 8 MWh	No	N/A	\$7,268	\$12.14	8.676%	\$631.63	\$27.00	0.000%	\$0.00	\$0.00	\$27.00	\$658.63
Flow Battery, , 20 MW, 160 MWh	Yes	N/A	\$4,686	\$12.14	8.676%	\$407.64	\$30.50	0.000%	\$0.00	\$0.00	\$30.50	\$438.14
Small Modular Reactor	Yes	5,000	\$6,257	\$721.53	6.733%	\$469.89	\$180.53	5.687%	\$10.27	\$0.00	\$190.80	\$660.69

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)			Capital Cost \$/kW				Fixed Cost					
							Fixed O&M \$/kW-Yr					
			Total Capital and Environmental Cost 1/	Demolition Cost	Payment Factor 1/	Annual Payment (\$/kW- Yr)	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Gas Transportation 1/	Total	Total Fixed (\$/kW-Yr)
Resource Description	Modeled IRP	Elevation (AFSL)										
Brownfield Site												
Utah (Hunter, Huntington)												
Brownfield SCCT Frame "F" x1	Yes	5,050	\$811	\$12.14	7.049%	\$58.00	0.00	0.273%	\$0.00	\$14.93	\$14.93	\$72.94
Intercooled SCCT Aero x2	Yes	5,050	\$1,363	\$12.14	7.497%	\$103.10	0.00	1.135%	\$0.00	\$13.22	\$13.22	\$116.32
Brownfield CCCT Dry "H", DF, 2x1	Yes	5,050	\$1,251	\$12.14	6.886%	\$87.00	0.00	0.000%	\$0.00	\$9.84	\$9.84	\$96.84
CCCT Dry "J", 1x1	Yes	5,050	\$1,299	\$12.14	6.886%	\$90.28	0.00	0.000%	\$0.00	\$9.84	\$9.84	\$100.13
Milford, UT, 200 MW Solar, CF: 30.2% (10% ITC)	Yes	5,000	\$1,297	\$35.00	6.839%	\$91.11	17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.95
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	5,000	\$2,102	\$255.00	6.839%	\$161.21	30.45	1.379%	\$0.42	\$0.00	\$30.87	\$192.08
Wyoming (Bridger, Johnston, Wyodak)							0					
Brownfield SCCT Frame "F" x1	Yes	6,500	\$854	\$12.80	7.049%	\$61.12	0.00	0.273%	\$0.00	\$9.70	\$9.70	\$70.82
Intercooled SCCT Aero x2	Yes	6,500	\$1,427	\$12.72	7.497%	\$107.96	0.00	1.135%	\$0.00	\$8.62	\$8.62	\$116.58
Brownfield CCCT Dry "H", DF, 2x1	Yes	6,500	\$1,283	\$12.45	6.886%	\$89.18	0.00	0.000%	\$0.00	\$6.62	\$6.62	\$95.80
CCCT Dry "J", 1x1	Yes	6,500	\$1,337	\$12.50	6.886%	\$92.91	0.00	0.000%	\$0.00	\$6.62	\$6.62	\$99.53
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (60% PTC)	Yes	6,500	\$1,356	\$12.50	6.979%	\$95.54	24.74	0.000%	\$0.00	\$0.00	\$24.74	\$120.28
Medicine Bow, WY, 200 MW Wind, CF: 43.6% + BESS: 50% pwr, 4 hours	Yes	6,500	\$2,136	\$232.50	6.979%	\$165.29	37.59	2.902%	\$1.09	\$0.00	\$38.68	\$203.97
Rock Springs, WY, 200 MW Solar, CF: 27.9% (10% ITC)	Yes	6,400	\$1,297	\$35.00	6.839%	\$91.07	17.60	1.379%	\$0.24	\$0.00	\$17.84	\$108.91
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	Yes	6,400	\$2,128	\$255.00	6.839%	\$163.01	30.45	1.379%	\$0.42	\$0.00	\$30.87	\$193.88
Naughton 1 PC CCUS Retrofit	Yes	6,500	\$3,939	\$37.00	8.920%	\$354.70	39.99	5.541%	\$2.22	\$0.00	\$42.21	\$396.91
Naughton 2 PC CCUS Retrofit	Yes	6,500	\$3,930	\$37.00	8.920%	\$353.83	39.90	5.541%	\$2.21	\$0.00	\$42.11	\$395.94
Johnston 2 PC CCUS Retrofit	Yes	6,500	\$5,314	\$37.00	8.920%	\$477.27	40.58	5.541%	\$2.25	\$0.00	\$42.83	\$520.10
Johnston 4 PC CCUS Retrofit	Yes	6,500	\$3,877	\$37.00	8.920%	\$349.16	37.88	5.541%	\$2.10	\$0.00	\$39.97	\$389.13
Wyodak PC CCUS Retrofit	Yes	6,500	\$3,935	\$37.00	9.010%	\$357.86	39.95	5.541%	\$2.21	\$0.00	\$42.16	\$400.02
Bridger 1 PC CCUS Retrofit	Yes	6,500	\$3,934	\$37.00	8.920%	\$354.24	39.94	5.541%	\$2.21	\$0.00	\$42.15	\$396.39
Bridger 3 PC CCUS Retrofit	Yes	6,500	\$3,873	\$37.00	9.010%	\$352.29	37.83	5.541%	\$2.10	\$0.00	\$39.93	\$392.22
Bridger 4 PC CCUS Retrofit	Yes	6,500	\$3,876	\$37.00	9.010%	\$352.56	37.86	5.541%	\$2.10	\$0.00	\$39.96	\$392.52

1/ Input into IRP PLEXOS Model

2/ Wind and solar shapes are input into IRP PLEXOS Model

Information Presented is Illustrative

Information Presented is Illustrative

CCUS costs are incremental and include envirmontmental upgrade costs but are missing underlying coal unit costs

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh											Total Resource Cost - with PTC / ITC / 45Q Credits
					Levelized Fuel							Credits	
		Capacity Factor 2/	Capital Fixed(\$/MWh)	Storage Efficiency	\$/mmBtu	\$/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost	PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)	
Resource Description	Elevation (AFSL)												
SCCT Aero x3	0	33%	\$49.25	N/A	\$ 2.97	\$ 27.77	\$ 7.44	11.48%	\$ 0.85	\$ -	\$85.32	\$ -	\$85.32
Intercooled SCCT Aero x2	0	33%	\$39.84	N/A	\$ 2.97	\$ 26.13	\$ 5.03	11.48%	\$ 0.58	\$ -	\$71.58	\$ -	\$71.58
SCCT Frame "F" x1	0	33%	\$28.97	N/A	\$ 2.97	\$ 29.44	\$ 14.16	13.23%	\$ 1.87	\$ -	\$74.44	\$ -	\$74.44
Brownfield SCCT Frame "F" x1	0	33%	\$28.36	N/A	\$ 2.97	\$ 29.44	\$ 14.16	13.23%	\$ 1.87	\$ -	\$73.83	\$ -	\$73.83
IC Recips x 6	0	33%	\$57.40	N/A	\$ 2.97	\$ 24.61	\$ 10.39	8.73%	\$ 0.91	\$ -	\$93.30	\$ -	\$93.30
CCCT Dry "H", 1x1	0	78%	\$17.62	N/A	\$ 2.97	\$ 18.84	\$ 1.77	10.21%	\$ 0.18	\$ -	\$38.41	\$ -	\$38.41
CCCT Dry "H", DF, 1x1	0	12%	\$53.19	N/A	\$ 2.97	\$ 26.25	\$ 0.05	0.00%	\$ -	\$ -	\$79.49	\$ -	\$79.49
CCCT Dry "H", 2x1	0	78%	\$13.83	N/A	\$ 2.97	\$ 18.89	\$ 1.71	10.79%	\$ 0.18	\$ -	\$34.61	\$ -	\$34.61
CCCT Dry "H", DF, 2x1	0	12%	\$45.87	N/A	\$ 2.97	\$ 25.73	\$ 0.05	0.00%	\$ -	\$ -	\$71.65	\$ -	\$71.65
Brownfield CCCT Dry "H", DF, 2x1	0	78%	\$13.78	N/A	\$ 2.97	\$ 19.63	\$ 1.08	10.21%	\$ 0.11	\$ -	\$34.61	\$ -	\$34.61
CCCT Dry "J", 1x1	0	78%	\$14.25	N/A	\$ 2.97	\$ 18.60	\$ 1.48	10.21%	\$ 0.15	\$ -	\$34.49	\$ -	\$34.49
CCCT Dry "J", DF, 1x1	0	12%	\$48.26	N/A	\$ 2.97	\$ 26.05	\$ 0.06	0.00%	\$ -	\$ -	\$74.36	\$ -	\$74.36
CCCT Dry "J", 2x1	0	78%	\$11.45	N/A	\$ 2.97	\$ 18.57	\$ 1.43	10.79%	\$ 0.15	\$ -	\$31.60	\$ -	\$31.60
CCCT Dry "J", DF, 2x1	0	12%	\$42.48	N/A	\$ 2.97	\$ 25.85	\$ 0.06	0.00%	\$ -	\$ -	\$68.39	\$ -	\$68.39
SCCT Aero x3	1,500	33%	\$51.59	N/A	\$ 2.97	\$ 27.81	\$ 7.89	11.48%	\$ 0.91	\$ -	\$88.19	\$ -	\$88.19
Intercooled SCCT Aero x2	1,500	33%	\$41.52	N/A	\$ 2.97	\$ 26.14	\$ 5.31	11.48%	\$ 0.61	\$ -	\$73.58	\$ -	\$73.58
SCCT Frame "F" x1	1,500	33%	\$29.99	N/A	\$ 2.97	\$ 29.45	\$ 14.94	13.23%	\$ 1.98	\$ -	\$76.36	\$ -	\$76.36
Brownfield SCCT Frame "F" x1	1,500	33%	\$29.34	N/A	\$ 2.97	\$ 29.45	\$ 14.94	13.23%	\$ 1.98	\$ -	\$75.71	\$ -	\$75.71
IC Recips x 6	1,500	33%	\$57.40	N/A	\$ 2.97	\$ 24.61	\$ 10.39	8.73%	\$ 0.91	\$ -	\$93.30	\$ -	\$93.30
CCCT Dry "H", 1x1	1,500	78%	\$18.51	N/A	\$ 2.97	\$ 18.96	\$ 1.88	10.21%	\$ 0.19	\$ -	\$39.54	\$ -	\$39.54
CCCT Dry "H", DF, 1x1	1,500	12%	\$53.00	N/A	\$ 2.97	\$ 26.10	\$ 0.05	0.00%	\$ -	\$ -	\$79.15	\$ -	\$79.15
CCCT Dry "H", 2x1	1,500	78%	\$14.42	N/A	\$ 2.97	\$ 18.91	\$ 1.81	10.79%	\$ 0.19	\$ -	\$35.34	\$ -	\$35.34
CCCT Dry "H", DF, 2x1	1,500	12%	\$45.67	N/A	\$ 2.97	\$ 25.88	\$ 0.05	0.00%	\$ -	\$ -	\$71.60	\$ -	\$71.60
Brownfield CCCT Dry "H", DF, 2x1	1,500	78%	\$14.38	N/A	\$ 2.97	\$ 19.70	\$ 1.14	10.21%	\$ 0.12	\$ -	\$35.35	\$ -	\$35.35
CCCT Dry "J", 1x1	1,500	78%	\$14.87	N/A	\$ 2.97	\$ 18.60	\$ 1.57	10.21%	\$ 0.16	\$ -	\$35.20	\$ -	\$35.20
CCCT Dry "J", DF, 1x1	1,500	12%	\$48.08	N/A	\$ 2.97	\$ 26.18	\$ 0.06	0.00%	\$ -	\$ -	\$74.32	\$ -	\$74.32
CCCT Dry "J", 2x1	1,500	78%	\$11.91	N/A	\$ 2.97	\$ 18.56	\$ 1.51	10.79%	\$ 0.16	\$ -	\$32.15	\$ -	\$32.15
CCCT Dry "J", DF, 2x1	1,500	12%	\$42.30	N/A	\$ 2.97	\$ 25.96	\$ 0.06	0.00%	\$ -	\$ -	\$68.32	\$ -	\$68.32
SCCT Aero x3	3,000	33%	\$48.82	N/A	\$ 3.21	\$ 30.11	\$ 8.37	11.48%	\$ 0.96	\$ -	\$88.26	\$ -	\$88.26
Intercooled SCCT Aero x2	3,000	33%	\$38.49	N/A	\$ 3.21	\$ 28.28	\$ 5.63	11.48%	\$ 0.65	\$ -	\$73.05	\$ -	\$73.05
SCCT Frame "F" x1	3,000	33%	\$25.49	N/A	\$ 3.21	\$ 31.87	\$ 15.79	13.23%	\$ 2.09	\$ -	\$75.24	\$ -	\$75.24
Brownfield SCCT Frame "F" x1	3,000	33%	\$24.81	N/A	\$ 3.21	\$ 31.87	\$ 15.78	13.23%	\$ 2.09	\$ -	\$74.55	\$ -	\$74.55

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh			Variable Costs(\$/MWh)								Total Resource Cost - with PTC / ITC / 45Q Credits
					Levelized Fuel							Credits	
												PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)	
Resource Description	Elevation (A/SL)	Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	\$/mmBtu	\$/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost		
IC Recips x 6	3,000	33%	\$52.80	N/A	\$ 3.21	\$ 26.60	\$ 10.39	8.73%	\$ 0.91	\$ -	\$90.69	\$ -	\$90.69
CCCT Dry "H", 1x1	3,000	78%	\$19.33	N/A	\$ 3.21	\$ 20.50	\$ 1.99	10.21%	\$ 0.20	\$ -	\$42.02	\$ -	\$42.02
CCCT Dry "H", DF, 1x1	3,000	12%	\$52.92	N/A	\$ 3.21	\$ 28.30	\$ 0.05	0.00%	\$ -	\$ -	\$81.26	\$ -	\$81.26
CCCT Dry "H", 2x1	3,000	78%	\$13.46	N/A	\$ 3.21	\$ 20.55	\$ 1.92	10.79%	\$ 0.21	\$ -	\$36.13	\$ -	\$36.13
CCCT Dry "H", DF, 2x1	3,000	12%	\$35.23	N/A	\$ 3.21	\$ 28.11	\$ 0.05	0.00%	\$ -	\$ -	\$63.39	\$ -	\$63.39
Brownfield CCCT Dry "H", DF, 2x1	3,000	78%	\$13.43	N/A	\$ 3.21	\$ 21.45	\$ 1.21	10.21%	\$ 0.12	\$ -	\$36.22	\$ -	\$36.22
CCCT Dry "J", 1x1	3,000	78%	\$13.89	N/A	\$ 3.21	\$ 20.13	\$ 1.66	10.21%	\$ 0.17	\$ -	\$35.84	\$ -	\$35.84
CCCT Dry "J", DF, 1x1	3,000	12%	\$37.71	N/A	\$ 3.21	\$ 28.37	\$ 0.06	0.00%	\$ -	\$ -	\$66.14	\$ -	\$66.14
CCCT Dry "J", 2x1	3,000	78%	\$10.77	N/A	\$ 3.21	\$ 20.08	\$ 1.60	10.79%	\$ 0.17	\$ -	\$32.62	\$ -	\$32.62
CCCT Dry "J", DF, 2x1	3,000	12%	\$31.94	N/A	\$ 3.21	\$ 28.13	\$ 0.06	0.00%	\$ -	\$ -	\$60.13	\$ -	\$60.13
SCCT Aero x3	5,050	33%	\$51.28	N/A	\$ 3.13	\$ 29.42	\$ 9.04	11.48%	\$ 1.04	\$ -	\$90.78	\$ -	\$90.78
Intercooled SCCT Aero x2	5,050	33%	\$40.24	N/A	\$ 3.13	\$ 27.59	\$ 6.09	11.48%	\$ 0.70	\$ -	\$74.62	\$ -	\$74.62
SCCT Frame "F" x1	5,050	33%	\$25.97	N/A	\$ 3.13	\$ 31.10	\$ 17.04	13.23%	\$ 2.25	\$ -	\$76.36	\$ -	\$76.36
Brownfield SCCT Frame "F" x1	5,050	33%	\$25.23	N/A	\$ 3.13	\$ 31.10	\$ 17.03	13.23%	\$ 2.25	\$ -	\$75.62	\$ -	\$75.62
IC Recips x 6	5,050	33%	\$51.91	N/A	\$ 3.13	\$ 25.95	\$ 10.39	8.73%	\$ 0.91	\$ -	\$89.16	\$ -	\$89.16
CCCT Dry "H", 1x1	5,050	78%	\$18.57	N/A	\$ 3.13	\$ 19.91	\$ 2.14	10.21%	\$ 0.22	\$ -	\$40.84	\$ -	\$40.84
CCCT Dry "H", DF, 1x1	5,050	12%	\$40.21	N/A	\$ 3.13	\$ 26.75	\$ 0.05	0.00%	\$ -	\$ -	\$67.00	\$ -	\$67.00
CCCT Dry "H", 2x1	5,050	78%	\$14.19	N/A	\$ 3.13	\$ 20.31	\$ 2.10	10.79%	\$ 0.23	\$ -	\$36.82	\$ -	\$36.82
CCCT Dry "H", DF, 2x1	5,050	12%	\$32.88	N/A	\$ 3.13	\$ 29.64	\$ 0.05	0.00%	\$ -	\$ -	\$62.57	\$ -	\$62.57
Brownfield CCCT Dry "H", DF, 2x1	5,050	78%	\$14.17	N/A	\$ 3.13	\$ 21.51	\$ 1.33	10.21%	\$ 0.14	\$ -	\$37.15	\$ -	\$37.15
CCCT Dry "J", 1x1	5,050	78%	\$14.65	N/A	\$ 3.13	\$ 19.88	\$ 1.81	10.21%	\$ 0.18	\$ -	\$36.53	\$ -	\$36.53
CCCT Dry "J", DF, 1x1	5,050	12%	\$35.39	N/A	\$ 3.13	\$ 29.58	\$ 0.06	0.00%	\$ -	\$ -	\$65.03	\$ -	\$65.03
CCCT Dry "J", 2x1	5,050	78%	\$11.30	N/A	\$ 3.13	\$ 19.95	\$ 1.76	10.79%	\$ 0.19	\$ -	\$33.19	\$ -	\$33.19
CCCT Dry "J", DF, 2x1	5,050	12%	\$29.63	N/A	\$ 3.13	\$ 29.60	\$ 0.06	0.00%	\$ -	\$ -	\$59.28	\$ -	\$59.28
SCCT Aero x3	6,500	33%	\$54.26	N/A	\$ 3.09	\$ 28.78	\$ 9.96	11.48%	\$ 1.14	\$ -	\$94.14	\$ -	\$94.14
Intercooled SCCT Aero x2	6,500	33%	\$40.33	N/A	\$ 3.09	\$ 27.15	\$ 6.37	11.48%	\$ 0.73	\$ -	\$74.58	\$ -	\$74.58
SCCT Frame "F" x1	6,500	33%	\$25.27	N/A	\$ 3.09	\$ 30.68	\$ 17.95	13.23%	\$ 2.38	\$ -	\$76.29	\$ -	\$76.29
Brownfield SCCT Frame "F" x1	6,500	33%	\$24.50	N/A	\$ 3.09	\$ 30.68	\$ 17.95	13.23%	\$ 2.38	\$ -	\$75.51	\$ -	\$75.51
IC Recips x 6	6,500	33%	\$50.39	N/A	\$ 3.09	\$ 25.75	\$ 10.39	8.73%	\$ 0.91	\$ -	\$87.43	\$ -	\$87.43
CCCT Dry "H", 1x1	6,500	78%	\$20.89	N/A	\$ 3.09	\$ 19.75	\$ 2.23	10.21%	\$ 0.23	\$ -	\$43.10	\$ -	\$43.10
CCCT Dry "H", DF, 1x1	6,500	12%	\$50.43	N/A	\$ 3.09	\$ 27.37	\$ 0.05	0.00%	\$ -	\$ -	\$77.85	\$ -	\$77.85



Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh			Variable Costs(\$/MWh)								Total Resource Cost - with PTC / ITC / 45Q Credits	
		Elevation (AFSL)	Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	S/mmBtu	S/MWh	O&M 1/	Levelized Fuel					Credits
									Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost		
Resource Description	Elevation (AFSL)	Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	S/mmBtu	S/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost	PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)	Total Resource Cost - with PTC / ITC / 45Q Credits	
CCCT Dry "H", 2x1	6,500	78%	\$14.04	N/A	\$ 3.09	\$ 19.77	\$ 2.15	10.79%	\$ 0.23	\$ -	\$36.20	\$ -	\$36.20	
CCCT Dry "H", DF, 2x1	6,500	12%	\$29.79	N/A	\$ 3.09	\$ 27.35	\$ 0.05	0.00%	\$ -	\$ -	\$57.20	\$ -	\$57.20	
Brownfield CCCT Dry "H", DF, 2x1	6,500	78%	\$14.02	N/A	\$ 3.09	\$ 20.78	\$ 1.36	10.21%	\$ 0.14	\$ -	\$36.30	\$ -	\$36.30	
CCCT Dry "J", 1x1	6,500	78%	\$14.57	N/A	\$ 3.09	\$ 19.38	\$ 1.86	10.21%	\$ 0.19	\$ -	\$36.00	\$ -	\$36.00	
CCCT Dry "J", DF, 1x1	6,500	12%	\$32.32	N/A	\$ 3.09	\$ 27.39	\$ 0.06	0.00%	\$ -	\$ -	\$59.77	\$ -	\$59.77	
CCCT Dry "J", 2x1	6,500	78%	\$11.05	N/A	\$ 3.09	\$ 19.34	\$ 1.80	10.79%	\$ 0.19	\$ -	\$32.38	\$ -	\$32.38	
CCCT Dry "J", DF, 2x1	6,500	12%	\$26.56	N/A	\$ 3.09	\$ 27.16	\$ 0.06	0.00%	\$ -	\$ -	\$53.78	\$ -	\$53.78	
SCPC with CCS	4,500	90%	\$66.91	N/A	\$ 1.96	\$ 25.65	\$ 7.00	0.00%	\$ -	\$ -	\$99.56	\$ -	\$99.56	
IGCC with CCS	4,500	86%	\$69.93	N/A	\$ 1.96	\$ 21.21	\$ 11.77	11.52%	\$ 1.36	\$ -	\$104.27	\$ -	\$104.27	
PC CCS retrofit @ 500 MW pre-retrofit basis	4,500	90%	\$29.80	N/A	\$ 1.96	\$ 28.17	\$ 3.29	0.00%	\$ -	\$ -	\$61.26	\$ -	\$61.26	
SCPC with CCS	6,500	90%	\$73.66	N/A	\$ 1.96	\$ 25.95	\$ 7.58	0.00%	\$ -	\$ -	\$107.19	\$ -	\$107.19	
IGCC with CCS	6,500	86%	\$78.77	N/A	\$ 1.96	\$ 21.65	\$ 14.11	11.52%	\$ 1.63	\$ -	\$116.15	\$ -	\$116.15	
PC CCS retrofit @ 500 MW pre-retrofit basis	6,500	90%	\$29.80	N/A	\$ 1.96	\$ 28.17	\$ 3.29	0.00%	\$ -	\$ -	\$61.26	\$ -	\$61.26	
Blundell Dual Flash 90% CF	4,500	90%	\$59.71	N/A	\$ -	\$ -	\$ 1.16	0.00%	\$ -	\$ -	\$60.87	\$ (16.12)	\$44.75	
Greenfield Binary 90% CF	4,500	90%	\$61.71	N/A	\$ -	\$ -	\$ 1.16	0.00%	\$ -	\$ -	\$62.88	\$ (16.12)	\$46.75	
Generic Geothermal PPA 90% CF	4,500	90%	\$0.00	N/A	\$ -	\$ -	\$ 77.34	0.00%	\$ -	\$ -	\$77.34	\$ (16.12)	\$61.22	
Pocatello, ID, 200 MW Wind, CF: 37.1% (100% PTC)	4,500	37%	\$37.19	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$38.12	\$ (16.12)	\$22.00	
Arlington, OR, 200 MW Wind, CF: 37.1% (100% PTC)	1,500	37%	\$36.13	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$37.05	\$ (16.12)	\$20.93	
Monticello, UT, 200 MW Wind, CF: 29.5% (100% PTC)	4,500	30%	\$45.20	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$46.13	\$ (16.12)	\$30.00	
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (100%PTC)	6,500	44%	\$31.49	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$32.42	\$ (16.12)	\$16.30	
Goldendale, WA, 200 MW Wind, CF: 37.1% (100% PTC)	1,500	37%	\$37.73	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$38.66	\$ (16.12)	\$22.54	
Pocatello, ID, 200 MW Wind, CF: 37.1% (60% PTC)	4,500	37%	\$37.19	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$38.12	\$ (9.67)	\$28.45	
Arlington, OR, 200 MW Wind, CF: 37.1% (60% PTC)	1,500	37%	\$36.13	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$37.05	\$ (9.67)	\$27.38	
Monticello, UT, 200 MW Wind, CF: 29.5% (60% PTC)	4,500	30%	\$45.20	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$46.13	\$ (9.67)	\$36.45	
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (60% PTC)	6,500	44%	\$31.49	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$32.42	\$ (9.67)	\$22.75	
Goldendale, WA, 200 MW Wnd, CF: 37.1% (60% PTC)	1,500	37%	\$37.73	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$38.66	\$ (9.67)	\$28.99	
Pocatello, ID, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	4,500	37%	\$63.12	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$64.05	\$ (16.12)	\$47.92	
Arlington, OR, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	1,500	37%	\$61.69	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$62.62	\$ (16.12)	\$46.50	
Monticello, UT, 200 MW Wind, CF: 29.5% + BESS: 50% pwr, 4 hours	4,500	30%	\$76.90	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$77.83	\$ (16.12)	\$61.71	
Medicine Bow, WY, 200 MW Wind, CF: 43.6% + BESS: 50% pwr, 4 hours	6,500	44%	\$53.40	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$54.33	\$ (16.12)	\$38.21	
Goldendale, WA, 200 MW Wind, CF: 37.1% + BESS: 50% pwr, 4 hours	1,500	37%	\$64.37	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$65.30	\$ (16.12)	\$49.18	
Idaho Falls, ID, 100 MW Solar, CF: 26.1% (30% ITC)	4,700	26%	\$50.96	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$51.67	\$ (10.96)	\$40.70	
Idaho Falls, ID, 200 MW Solar, CF: 26.1% (30% ITC)	4,700	26%	\$47.13	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$47.84	\$ (9.99)	\$37.85	
Lakeview, OR, 100 MW Solar, CF: 27.6% (30% ITC)	4,800	28%	\$48.64	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$49.35	\$ (10.48)	\$38.86	
Lakeview, OR, 200 MW Solar, CF: 27.6% (30% ITC)	4,800	28%	\$45.37	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$46.08	\$ (9.66)	\$36.42	
Milford, UT, 100 MW Solar, CF: 30.2% (30% ITC)	5,000	30%	\$44.42	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$45.12	\$ (9.43)	\$35.69	
Milford, UT, 200 MW Solar, CF: 30.2% (30% ITC)	5,000	30%	\$41.18	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$41.89	\$ (8.60)	\$33.28	
Rock Springs, WY, 100 MW Solar, CF: 27.9% (30% ITC)	6,400	28%	\$48.10	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$48.80	\$ (10.21)	\$38.58	
Rock Springs, WY, 200 MW Solar, CF: 27.9% (30% ITC)	6,400	28%	\$44.56	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$45.27	\$ (9.31)	\$35.96	
Yakima, WA, 100 MW Solar, CF: 24.2% (30% ITC)	1,000	24%	\$57.49	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$58.20	\$ (12.30)	\$45.90	
Yakima, WA, 200 MW Solar, CF: 24.2% (30% ITC)	1,000	24%	\$53.32	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$54.03	\$ (11.23)	\$42.80	
Idaho Falls, ID, 100 MW Solar, CF: 26.1% (10% ITC)	4,700	26%	\$50.96	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$51.67	\$ (0.52)	\$51.15	
Idaho Falls, ID, 200 MW Solar, CF: 26.1% (10% ITC)	4,700	26%	\$47.13	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$47.84	\$ (0.47)	\$47.36	
Lakeview, OR, 100 MW Solar, CF: 27.6% (10% ITC)	4,800	28%	\$48.64	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$49.35	\$ (0.50)	\$48.85	
Lakeview, OR, 200 MW Solar, CF: 27.6% (10% ITC)	4,800	28%	\$45.37	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$46.08	\$ (0.46)	\$45.62	
Milford, UT, 100 MW Solar, CF: 30.2% (10% ITC)	5,000	30%	\$44.42	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$45.12	\$ (0.45)	\$44.67	
Milford, UT, 200 MW Solar, CF: 30.2% (10% ITC)	5,000	30%	\$41.18	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$41.89	\$ (0.41)	\$41.48	

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh			Variable Costs(\$/MWh)								Credits	
		Elevation (AFSL)	Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	\$ /mmBtu	\$/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost		
													PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)	Total Resource Cost - with PTC / ITC / 45Q Credits
Resource Description														
Rock Springs, WY, 100 MW Solar, CF: 27.9% (10% ITC)	6,400	28%	\$48.10	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$48.80	\$ (0.48)	\$48.31	
Rock Springs, WY, 200 MW Solar, CF: 27.9% (10% ITC)	6,400	28%	\$44.56	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$45.27	\$ (0.44)	\$44.82	
Yakima, WA, 100 MW Solar, CF: 24.2% (10% ITC)	1,000	24%	\$57.49	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$58.20	\$ (0.58)	\$57.61	
Yakima, WA, 200 MW Solar, CF: 24.2% (10% ITC)	1,000	24%	\$53.32	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$54.03	\$ (0.53)	\$53.50	
Idaho Falls, ID, 100 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (30% ITC)	4,700	26%	\$91.26	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$91.97	\$ (18.04)	\$73.92	
Idaho Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (30% ITC)	4,700	26%	\$85.11	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$85.82	\$ (16.59)	\$69.23	
Lakeview, OR, 100 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (30% ITC)	4,800	28%	\$85.67	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$86.37	\$ (16.90)	\$69.47	
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (30% ITC)	4,800	28%	\$80.28	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$80.98	\$ (15.63)	\$65.35	
Milford, UT, 100 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	5,000	30%	\$77.65	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$78.35	\$ (15.14)	\$63.21	
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	5,000	30%	\$72.60	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$73.31	\$ (13.94)	\$59.37	
Rock Springs, WY, 100 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	6,400	28%	\$84.86	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$85.56	\$ (16.60)	\$68.96	
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	6,400	28%	\$79.33	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$80.03	\$ (15.28)	\$64.75	
Yakima, WA, 100 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (30% ITC)	1,000	24%	\$100.83	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$101.53	\$ (19.90)	\$81.62	
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (30% ITC)	1,000	24%	\$94.31	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$95.01	\$ (18.35)	\$76.66	
Idaho Falls, ID, 100 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (10% ITC)	4,700	26%	\$91.26	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$91.97	\$ (0.86)	\$91.11	
Idaho Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours (10% ITC)	4,700	26%	\$85.11	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$85.82	\$ (0.79)	\$85.03	
Lakeview, OR, 100 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (10% ITC)	4,800	28%	\$85.67	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$86.37	\$ (0.80)	\$85.57	
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours (10% ITC)	4,800	28%	\$80.28	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$80.98	\$ (0.74)	\$80.24	
Milford, UT, 100 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (10% ITC)	5,000	30%	\$77.65	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$78.35	\$ (0.72)	\$77.63	
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (10% ITC)	5,000	30%	\$72.60	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$73.31	\$ (0.66)	\$72.65	
Rock Springs, WY, 100 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (10% ITC)	6,400	28%	\$84.86	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$85.56	\$ (0.79)	\$84.78	
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (10% ITC)	6,400	28%	\$79.33	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$80.03	\$ (0.73)	\$79.31	
Yakima, WA, 100 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (10% ITC)	1,000	24%	\$100.83	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$101.53	\$ (0.94)	\$100.59	
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours (10% ITC)	1,000	24%	\$94.31	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$95.01	\$ (0.87)	\$94.14	
Idah Falls, ID, 200 MW Solar, CF: 26.1% + BESS: 50% pwr, 4 hours + 200 MW Wind	4,700	26%	\$146.34	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$147.05	\$ -	\$147.05	
Lakeview, OR, 200 MW Solar, CF: 27.6% + BESS: 50% pwr, 4 hours + 200 MW Wind	4,800	28%	\$139.19	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$139.90	\$ -	\$139.90	
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	5,000	30%	\$125.10	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$125.80	\$ -	\$125.80	
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours + 200 MW Wind	6,400	28%	\$135.39	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$136.10	\$ -	\$136.10	
Yakima, WA, 200 MW Solar, CF: 24.2% + BESS: 50% pwr, 4 hours + 200 MW Wind	1,000	24%	\$158.04	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$158.75	\$ -	\$158.75	
Pumped Hydro, Swan Lake, 3600 MWh	N/A	38%	\$112.18	78%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$112.18	\$ -	\$112.18	
Pumped Hydro, Goldendale, 14400 MWh	N/A	50%	\$80.40	78%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ -	\$80.40	\$ -	\$80.40	
Pumped Hydro, Seminole, 7500 MWh	N/A	42%	\$105.85	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$106.22	\$ -	\$106.22	
Pumped Hydro, Badger Mountain, 4000 MWh	N/A	33%	\$118.84	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$119.21	\$ -	\$119.21	
Pumped Hydro, Owyhee, 4800 MWh	N/A	33%	\$128.28	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$128.65	\$ -	\$128.65	
Pumped Hydro, Flat Canyon, 1800 MWh	N/A	25%	\$209.80	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$210.17	\$ -	\$210.17	
Pumped Hydro, Utah PS2, 4000 MWh	N/A	33%	\$131.74	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$132.11	\$ -	\$132.11	
Pumped Hydro, Utah PS3, 4800 MWh	N/A	33%	\$131.80	80%	\$ -	\$ -	\$ 0.37	0.00%	\$ -	\$ -	\$132.17	\$ -	\$132.17	
Pumped Hydro, Banner Mountain, 3400 MWh	N/A	35%	\$131.88	81%	\$ -	\$ -	\$ 0.00	0.00%	\$ -	\$ -	\$131.88	\$ -	\$131.88	
Adiabatic CAES, Hydrostor, 150 MW, 600 MWh	N/A	17%	\$109.63	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$116.13	\$ -	\$116.13	
Adiabatic CAES, Hydrostor, 150 MW, 1200 MWh	N/A	33%	\$60.85	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$67.35	\$ -	\$67.35	
Adiabatic CAES, Hydrostor, 150 MW, 1800 MWh	N/A	50%	\$44.95	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$51.45	\$ -	\$51.45	
Adiabatic CAES, Hydrostor, 300 MW, 1200 MWh	N/A	17%	\$86.97	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$93.47	\$ -	\$93.47	
Adiabatic CAES, Hydrostor, 300 MW, 2400 MWh	N/A	33%	\$46.96	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$53.46	\$ -	\$53.46	
Adiabatic CAES, Hydrostor, 300 MW, 3600 MWh	N/A	50%	\$36.84	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$43.34	\$ -	\$43.34	
Adiabatic CAES, Hydrostor, 500 MW, 2000 MWh	N/A	17%	\$84.70	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$91.20	\$ -	\$91.20	
Adiabatic CAES, Hydrostor, 500 MW, 4000 MWh	N/A	33%	\$47.81	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$54.31	\$ -	\$54.31	
Adiabatic CAES, Hydrostor, 500 MW, 6000 MWh	N/A	50%	\$34.76	60%	\$ -	\$ -	\$ 6.50	0.00%	\$ -	\$ -	\$41.26	\$ -	\$41.26	

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh			Variable Costs(\$/MWh)								
					Levelized Fuel							Credits	
		Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	\$/mmBtu	\$/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost 1/	Total Resource Cost	PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)	Total Resource Cost - with PTC / ITC / 45Q Credits
Resource Description	Elevation (AFSL)												
Li-Ion Battery, , 1 MW, 0.5 MWh	N/A	2%	\$1,171.19	85%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$1,171.19	\$ -	\$1,171.19
Li-Ion Battery, , 1 MW, 1 MWh	N/A	4%	\$652.41	85%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$652.41	\$ -	\$652.41
Li-Ion Battery, , 1 MW, 4 MWh	N/A	17%	\$262.28	85%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$262.28	\$ -	\$262.28
Li-Ion Battery, , 1 MW, 8 MWh	N/A	33%	\$197.30	85%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$197.30	\$ -	\$197.30
Li-Ion Battery, , 50 MW, 200 MWh	N/A	17%	\$153.65	85%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$153.65	\$ -	\$153.65
Flow Battery, , 1 MW, 1 MWh	N/A	4%	\$1,160.11	70%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$1,160.11	\$ -	\$1,160.11
Flow Battery, , 1 MW, 4 MWh	N/A	17%	\$309.79	70%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$309.79	\$ -	\$309.79
Flow Battery, , 1 MW, 8 MWh	N/A	33%	\$225.56	70%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$225.56	\$ -	\$225.56
Flow Battery, , 20 MW, 160 MWh	N/A	33%	\$150.05	70%	\$ -	\$ -	ncluded in FOI	0.00%	\$ -	\$ -	\$150.05	\$ -	\$150.05
Small Modular Reactor	5000	86%	\$ 88.15	N/A	\$ -	\$ -	\$ 16.14	0.00%	\$ -	\$ -	\$104.29	\$ -	\$104.29

Supply Side Resource Options Mid-Calendar Year 2020 Dollars (\$)		Convert to \$/MWh					Variable Costs (\$/MWh)							
		Capacity Factor 3/	Total Fixed (\$/MWh)	Storage Efficiency	Levelized Fuel							Credits	Total Resource Cost - with PTC / ITC 45Q Credits	
					¢/mmBtu	\$/MWh	O&M 1/	Capitalized Premium	O&M Capitalized 1/	Integration Cost / CO2 Revenues	Total Resource Cost			
												PTC Tax Credits / ITC (Solar Only) / 45Q Tax Credits (CCUS Only)		
Resource Description	Elevation (AFSL)													
Brownfield Site														
Utah														
Brownfield SCCT Frame "F" x1	5050	33%	\$25.23	N/A	\$ 3.13	\$ 31.10	\$ 17.03	13.23%	\$ 2.25	\$ -	\$75.62	\$ -	\$75.62	
Intercooled SCCT Aero x2	5050	33%	\$40.24	N/A	\$ 3.13	\$ 27.59	\$ 6.09	11.48%	\$ 0.70	\$ -	\$74.62	\$ -	\$74.62	
Brownfield CCCT Dry "H", DF, 2x1	5050	78%	\$14.17	N/A	\$ 3.13	\$ 21.51	\$ 1.33	10.21%	\$ 0.14	\$ -	\$37.15	\$ -	\$37.15	
CCCT Dry "J", 1x1	5050	78%	\$14.65	N/A	\$ 3.13	\$ 19.88	\$ 1.81	10.21%	\$ 0.18	\$ -	\$36.53	\$ -	\$36.53	
Milford, UT, 200 MW Solar, CF: 30.2% (10% ITC)	5000	30%	\$41.18	N/A	\$ -	\$ -	\$ -	0.00%	\$ 1.18	\$ -	\$ 0.70	\$41.89	\$ (0.41)	\$41.48
Milford, UT, 200 MW Solar, CF: 30.2% + BESS: 50% pwr, 4 hours (30% ITC)	5,000	30%	\$72.60	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$73.31	\$ (13.94)	\$59.37	
Wyoming														
Brownfield SCCT Frame "F" x1	6500	33%	\$24.50	N/A	\$ 3.09	\$ 30.68	\$ 17.95	13.23%	\$ 2.38	\$ -	\$75.51	\$ -	\$75.51	
Intercooled SCCT Aero x2	6500	33%	\$40.33	N/A	\$ 3.09	\$ 27.15	\$ 6.37	11.48%	\$ 0.73	\$ -	\$74.58	\$ -	\$74.58	
Brownfield CCCT Dry "H", DF, 2x1	6500	78%	\$14.02	N/A	\$ 3.09	\$ 20.78	\$ 1.36	10.21%	\$ 0.14	\$ -	\$36.30	\$ -	\$36.30	
CCCT Dry "J", 1x1	6500	78%	\$14.57	N/A	\$ 3.09	\$ 19.38	\$ 1.86	10.21%	\$ 0.19	\$ -	\$36.00	\$ -	\$36.00	
Medicine Bow, WY, 200 MW Wind, CF: 43.6% (60% PTC)	6,500	44%	\$31.49	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$32.42		\$32.42	
Medicine Bow, WY, 200 MW Wind, CF: 43.6% + BESS: 50% pwr, 4 hours	6,500	44%	\$53.40	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.93	\$54.33		\$54.33	
Rock Springs, WY, 200 MW Solar, CF: 27.9% (10% ITC)	6400	28%	\$44.56	N/A	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$45.27	\$ (0.44)	\$44.82	
Rock Springs, WY, 200 MW Solar, CF: 27.9% + BESS: 50% pwr, 4 hours (30% ITC)	6,400	28%	\$79.33	85%	\$ -	\$ -	\$ -	0.00%	\$ -	\$ 0.70	\$80.03	\$ (15.28)	\$64.75	
Naughton 1 PC CCUS Retrofit	6,500	85%	\$53.31	0%	\$ 2.28	\$ 32.77	\$ 7.32	0.00%	\$ -	\$ (12.28)	\$81.12	\$ (25.79)	\$55.33	
Naughton 2 PC CCUS Retrofit	6,500	85%	\$53.17	0%	\$ 2.28	\$ 32.77	\$ 7.30	0.00%	\$ -	\$ (12.28)	\$80.97	\$ (25.79)	\$55.18	
Johnston 2 PC CCUS Retrofit	6,500	85%	\$69.85	0%	\$ 0.99	\$ 14.23	\$ 6.10	0.00%	\$ -	\$ (12.28)	\$77.90	\$ (25.79)	\$52.11	
Johnston 4 PC CCUS Retrofit	6,500	85%	\$52.26	0%	\$ 0.99	\$ 14.23	\$ 5.69	0.00%	\$ -	\$ (12.28)	\$59.91	\$ (25.79)	\$34.12	
Wyodak PC CCUS Retrofit	6,500	85%	\$53.72	0%	\$ 1.14	\$ 16.38	\$ 7.31	0.00%	\$ -	\$ (12.28)	\$65.14	\$ (25.79)	\$39.35	
Bridger 1 PC CCUS Retrofit	6,500	85%	\$53.24	0%	\$ 2.12	\$ 30.47	\$ 7.31	0.00%	\$ -	\$ (12.28)	\$78.74	\$ (25.79)	\$52.95	
Bridger 3 PC CCUS Retrofit	6,500	85%	\$52.68	0%	\$ 2.12	\$ 30.47	\$ 5.69	0.00%	\$ -	\$ (12.28)	\$76.56	\$ (25.79)	\$50.77	
Bridger 4 PC CCUS Retrofit	6,500	85%	\$52.72	0%	\$ 2.12	\$ 30.47	\$ 5.69	0.00%	\$ -	\$ (12.28)	\$76.60	\$ (25.79)	\$50.81	

1/ Input into IRP PLEXOS Model

2/ Wind and solar shapes are input into IRP PLEXOS Model

NC = Not Calculated

Information Presented is Illustrative

CCUS costs are incremental and include envirnomentlal upgrade costs but are missing underlying coal unit costs