

Table 4-16 Performance and Unit Cost Assumptions for Potential (New) Renewable and Non-Conventional Technology Capacity in EPA Platform v6

	Biomass-Bubbling Fluidized Bed (BFB)	Geothermal	Landfill Gas			Fuel Cells	Solar Photovoltaic	Solar Thermal	Onshore Wind	Offshore Wind
			LGHI	LGLo	LGVLo					
Size (MW)	50	50	50			10	150	100	100	400
First Year Available	2021	2021	2021			2021	2021	2021	2021	2021
Lead Time (Years)	4	4	3			3	1	3	3	3
Availability	83%	90% - 95%	90%			87%	90%	90%	95%	95%
Generation Capability	Economic Dispatch	Economic Dispatch	Economic Dispatch			Economic Dispatch	Generation Profile	Economic Dispatch	Generation Profile	Generation Profile
	Vintage #1 (2021-2054)					Vintage #1 (2021)				
Heat Rate (Btu/kWh)	13,500	30,000	18,000	18,000	18,000	8,653	0	0	0	0
Capital (2016\$/kW)	3,733	3,072 - 21,106	8,556	10,780	16,598	6,889	1034	6,717	1,404	4,529
Fixed O&M (2016\$/kW/yr)	110.34	105 - 542	410.32	410.32	410.32	0.00	11.35	62.69	49.46	116.64
Variable O&M (2016\$/MWh)	5.49	0.00	9.14	9.14	9.14	44.9	0	3.5	0	0
Vintage #2 (2023)										
Heat Rate (Btu/kWh)						7,807	0	0	0	0
Capital (2016\$/kW)						6,680	1,009	6,555	1,372	4,169
Fixed O&M (2016\$/kW/yr)						0.0	10.74	59.9	48.72	111.15
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0

	Biomass- Bubbling Fluidized Bed (BFB)	Geothermal	Landfill Gas			Fuel Cells	Solar Photovoltaic	Solar Thermal	Onshore Wind	Offshore Wind
			LGHI	LGLo	LGVLo					
Vintage #3 (2025)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						6,434	984	6,396	1,337	4,122
Fixed O&M (2016\$/kW/yr)						0.0	10.13	57.12	47.98	109.58
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0
Vintage #4 (2030)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						5,809	921	6,047	1,242	4,006
Fixed O&M (2016\$/kW/yr)						0	10.13	50.15	46.13	105.66
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0
Vintage #5 (2035)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						5,300	870	5,762	1,234	3,952
Fixed O&M (2016\$/kW/yr)						0	10.13	50.15	44.29	104.98
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0
Vintage #6 (2040)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						4,841	819	5,527	1,218	3,898
Fixed O&M (2016\$/kW/yr)						0	10.13	50.15	42.44	104.29
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0
Vintage #7 (2045)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						4,402	772	5,354	1,195	3,837
Fixed O&M (2016\$/kW/yr)						0	10.13	50.15	40.6	103.54
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0
Vintage #8 (2050)										
Heat Rate (Btu/kWh)						6,960	0	0	0	0
Capital (2016\$/kW)						3,968	726	5,243	1,165	Save PDF to Evernote
Fixed O&M (2016\$/kW/yr)						0	10.13	50.15	38.75	
Variable O&M (2016\$/MWh)						44.9	0	3.5	0	0

EPA, *Documentation for EPA Platform v6, Ch. 4: Generating Resources*, at 4-27 – 4-28, tbl. 4-16 (Aug. 7, 2018), available at: https://www.epa.gov/sites/production/files/2018-08/documents/epa_platform_v6_documentation_-ch4_august_7_2018_updated_table_4-16.pdf.

Table 6-1 Cost and Performance Assumptions for Potential USC and NGCC with and without Carbon Capture⁵³

	Advanced Combined Cycle	Advanced Combined Cycle with CCS	Ultrasupercritical Coal with 30% CCS	Ultrasupercritical Coal with 90% CCS	Ultrasupercritical Coal without CCS
Vintage #1 (2021)					
Heat Rate (Btu/kWh)	6,267	7,514	9,644	11,171	8,609
Capital (2016\$/kW)	1,081	2,104	4,953	5,477	3,580
Fixed O&M (2016\$/kW/yr)	9.9	33.2	69.6	80.8	42.1
Variable O&M (2016\$/MWh)	2	7.1	7.1	9.5	4.6
Vintage #2 (2023)					
Heat Rate (Btu/kWh)	6,233	7,504	9,433	10,214	8,514
Capital (2016\$/kW)	1,064	2,059	4,863	5,378	3,516
Fixed O&M (2016\$/kW/yr)	9.9	33.2	69.6	80.8	42.1
Variable O&M (2016\$/MWh)	2	7.1	7.1	9.5	4.6
Vintage #3 (2025-2054)					
Heat Rate (Btu/kWh)	6,200	7,493	9,221	9,257	8,323
Capital (2016\$/kW)	1,041	2,003	4,746	5,249	3,431
Fixed O&M (2016\$/kW/yr)	9.9	33.2	69.6	80.8	42.1
Variable O&M (2016\$/MWh)	2	7.1	7.1	9.5	4.6

EPA, *Documentation for EPA Platform v6, Ch. 6: Carbon Capture, Transport and Storage*, at 6-2, tbl. 6-1 (Aug. 7, 2018), available at: https://www.epa.gov/sites/production/files/2018-06/documents/epa_platform_v6_documentation_-_june_7_2018_-_chapter_6.pdf.