

Table 1b. Estimated unweighted levelized cost of electricity (LCOE) and levelized cost of storage (LCOS) for new resources entering service in 2027 (2021 dollars per megawatthour)

Plant type	Capacity factor (percent)	Levelized capital cost	Levelized fixed O&M ^a	Levelized variable cost	Levelized transmission cost	Total system LCOE or LCOS	Levelized tax credit ^b	Total LCOE or LCOS including tax credit
Dispatchable technologies								
Ultra-supercritical coal	85%	\$52.11	\$5.71	\$23.67	\$1.12	\$82.61	NA	\$82.61
Combined cycle	87%	\$9.36	\$1.68	\$27.77	\$1.14	\$39.94	NA	\$39.94
Advanced nuclear	90%	\$60.71	\$16.15	\$10.30	\$1.08	\$88.24	-\$6.52	\$81.71
Geothermal	90%	\$22.04	\$15.18	\$1.21	\$1.40	\$39.82	-\$2.20	\$37.62
Biomass	83%	\$40.80	\$18.10	\$30.07	\$1.19	\$90.17	NA	\$90.17
Resource-constrained technologies								
Wind, onshore	41%	\$29.90	\$7.70	\$0.00	\$2.63	\$40.23	NA	\$40.23
Wind, offshore	44%	\$103.77	\$30.17	\$0.00	\$2.57	\$136.51	-\$31.13	\$105.38
Solar, standalone ^c	29%	\$26.60	\$6.38	\$0.00	\$3.52	\$36.49	-\$2.66	\$33.83
Solar, hybrid ^{c,d}	28%	\$34.98	\$13.92	\$0.00	\$3.63	\$52.53	-\$3.50	\$49.03
Hydroelectric ^d	54%	\$46.58	\$11.48	\$4.13	\$2.08	\$64.27	NA	\$64.27
Capacity resource technologies								
Combustion turbine	10%	\$53.78	\$8.37	\$45.83	\$9.89	\$117.86	NA	\$117.86
Battery storage	10%	\$64.03	\$29.64	\$24.83	\$10.05	\$128.55	NA	\$128.55

Source: U.S. Energy Information Administration, *Annual Energy Outlook 2022*

^a O&M = operations and maintenance

^b The tax credit component is based on targeted federal tax credits such as the Production Tax Credit (PTC) or Investment Tax Credit (ITC) available for some technologies. It reflects tax credits available only for plants entering service in 2027 and the substantial phaseout of both the PTC and ITC as scheduled under current law. Technologies not eligible for PTC or ITC are indicated as *NA*, or *not available*. The results are based on a regional model, and state or local incentives are not included in LCOE and LCOS calculations. See text box on page 2 for details on how the tax credits are represented in the model.

^c Technology is assumed to be photovoltaic (PV) with single-axis tracking. The solar hybrid system is a single-axis PV system coupled with a four-hour battery storage system. Costs are expressed in terms of net AC (alternating current) power available to the grid for the installed capacity.

^d As modeled, we assume that hydroelectric and hybrid solar PV generating assets have seasonal and diurnal storage, respectively, so that they can be dispatched within a season or a day, but overall operation is limited by resource availability by site and season for hydroelectric and by daytime for hybrid solar PV.



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