

Energy Market Impacts of a Clean Energy Portfolio Standard - Follow-up

Table 1. Key CEPS Analysis Results, 2020, 2025, and 2030

	2004	2020	2020	2025	2025	2030	2030
		Reference	CEPS	Reference	CEPS	Reference	CEPS
Generation (billion kilowatthours)							
Coal	1,977	2,505	2,302	2,896	2,547	3,381	2,803
Petroleum	120	107	109	108	103	115	108
Natural Gas	702	1,103	1,090	1,070	968	993	889
Nuclear Power	789	871	892	871	967	871	1,109
Conventional Hydropower	269	303	302	303	302	303	302
Geothermal	14	34	37	47	55	53	60
Municipal Solid Waste/Landfill Gas	22	29	34	30	36	30	37
Dedicated Biomass	36	51	53	63	119	77	285
Biomass Co-Firing	1	36	177	29	188	26	126
Solar ^A	1	3	3	4	4	6	6
Wind	14	60	97	63	201	65	210
Total	3,955	5,108	5,104	5,492	5,498	5,926	5,944
Clean Energy Portfolio Standard Compliance							
Electricity Sales (billion kilowatthours)	3,567	4,629	4,621	4,956	4,945	5,341	5,326
Percent Clean Energy Required ^B	0.0	0.0	9.4	0.0	13.8	0.0	16.6
Generating Capacity (gigawatts)							
Coal Steam	310	345	336	390	365	457	394
Other Fossil Steam	124	80	81	79	78	75	74
Combined Cycle	159	214	208	226	215	231	218
Combustion Turbine/Diesel	130	149	150	159	160	174	174
Nuclear Power	100	109	112	109	122	109	139
Other	0	1	1	2	3	6	7
Conventional Hydropower	78	78	78	79	78	78	78
Geothermal	2	5	5	6	7	7	8
Municipal Solid Waste/Landfill Gas	3	4	5	4	5	4	5
Wood and Other Biomass	6	8	10	10	19	12	42
Solar	1	1	1	2	2	3	3
Wind	7	19	30	20	60	20	63
Total	936	1,027	1,032	1,098	1,126	1,186	1,215
Price (2004 cents per kilowatthour)							
Credit Price	0.00	0.00	1.25	0.00	1.98	0.00	1.52
Retail Electricity Price	7.6	7.2	7.3	7.4	7.4	7.5	7.5
Electric Power Sector Emissions (million metric tons)							
Carbon Dioxide	2,299	2,835	2,649	3,052	2,711	3,318	2,830
Fuel Prices							
Natural Gas Wellhead Price (2004 dollars per thousand cubic feet)	5.49	4.90	4.91	5.43	5.26	5.92	5.78
Coal Minemouth Price (2004 dollars per ton)	20.07	20.20	19.71	20.63	19.53	21.73	20.17
^A Includes solar thermal power, utility-owned photovoltaics, and distributed photovoltaics.							
^B Incremental legislative target expressed as share of total same-year sales, accounting for exempt small retail suppliers and biological sequestration.							
Source: National Energy Modeling System runs: AEO2006.D111905A and AEO06_NWCOLES.D111606A							