

Table E1.cap. Electricity installed generating capacity: World, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	362	347	195	136	116	105	101	-4.2
Natural gas	1,839	1,981	2,078	2,068	2,054	2,074	2,155	0.5
Coal	2,201	2,203	2,128	2,119	2,116	2,116	2,140	-0.1
Nuclear	374	419	414	434	439	426	426	0.4
Renewables	2,394	3,583	4,317	4,899	5,591	6,338	6,985	3.6
Hydro	1,120	1,269	1,340	1,370	1,409	1,429	1,450	0.9
Wind	595	929	1,154	1,416	1,641	1,839	1,989	4.1
Geothermal	13	19	26	30	33	34	34	3.2
Solar	511	1,187	1,585	1,856	2,275	2,800	3,272	6.4
Other	155	180	212	228	232	236	240	1.5
Battery storage	3	11	27	44	130	244	363	17.1
Total capacity	7,172	8,543	9,158	9,700	10,447	11,302	12,170	1.8

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941; and EIA, *Annual Energy Outlook 2021* , (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E2.cap. Electricity installed generating capacity: OECD, Low Oil Price case

gigawatts

Fuel	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Liquid fuels	176	160	100	77	70	66	65	-3.3
Natural gas	948	1,040	1,084	1,073	1,100	1,135	1,207	0.8
Coal	543	470	409	401	397	392	392	-1.1
Nuclear	262	281	248	244	224	191	173	-1.4
Renewables	1,119	1,546	1,845	2,060	2,246	2,473	2,704	3.0
Hydro	387	412	429	436	442	449	455	0.5
Wind	341	488	592	714	822	951	1,076	3.9
Geothermal	8	9	11	13	14	14	15	2.1
Solar	287	540	695	772	842	931	1,030	4.4
Other	96	98	117	125	126	127	127	0.9
Battery storage	3	11	13	16	19	22	42	9.0
Total capacity	3,052	3,509	3,699	3,870	4,055	4,279	4,583	1.4

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E3.cap. Electricity installed generating capacity: United States, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	74	58	50	46	46	45	44	-1.7
Natural gas	429	506	548	591	648	712	788	2.1
Coal	221	138	120	114	111	106	106	-2.4
Nuclear	97	92	80	78	76	73	71	-1.0
Renewables	331	503	608	685	741	807	884	3.3
Hydro	79	80	80	80	80	80	80	0.0
Wind	127	198	211	226	229	233	242	2.2
Geothermal	2	3	4	5	6	6	7	3.5
Solar	84	184	275	335	386	447	514	6.2
Other	38	39	39	40	41	41	42	0.3
Battery storage	3	11	13	16	17	18	20	6.3
Total capacity	1,155	1,307	1,419	1,530	1,637	1,761	1,913	1.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E4.cap. Electricity installed generating capacity: Canada, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	4	4	0	0	0	0	0	-19.8
Natural gas	24	26	27	28	34	35	39	1.6
Coal	8	8	3	0	0	0	0	-36.8
Nuclear	14	14	11	10	7	6	4	-4.1
Renewables	99	110	122	131	140	149	158	1.6
Hydro	81	85	89	89	89	89	89	0.3
Wind	13	19	25	34	43	52	61	5.4
Geothermal	0	0	0	0	0	0	0	0.0
Solar	3	3	3	3	3	3	3	0.0
Other	3	3	4	4	4	4	4	1.6
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	150	162	163	169	181	189	201	1.0

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E5.cap. Electricity installed generating capacity: Mexico and other OECD Americas, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	19	19	9	5	5	5	5	-4.3
Natural gas	57	61	61	55	54	54	54	-0.2
Coal	12	12	12	12	12	12	12	0.0
Nuclear	2	2	3	4	3	2	2	1.5
Renewables	46	53	58	65	77	96	118	3.1
Hydro	31	37	39	40	40	40	40	0.8
Wind	7	7	7	10	14	18	21	3.9
Geothermal	1	1	1	1	1	1	1	0.0
Solar	5	6	8	11	19	34	53	8.1
Other	3	3	3	3	3	3	3	0.5
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	136	147	143	142	152	170	192	1.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E6.cap. Electricity installed generating capacity: OECD Europe, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	36	36	22	16	13	12	12	-3.5
Natural gas	267	272	272	246	230	216	216	-0.7
Coal	173	175	161	161	161	161	161	-0.2
Nuclear	117	117	99	97	90	67	53	-2.6
Renewables	512	706	852	936	999	1,081	1,177	2.8
Hydro	160	174	185	190	194	199	204	0.8
Wind	183	233	295	357	406	474	555	3.8
Geothermal	3	3	5	5	5	5	5	2.2
Solar	120	250	304	314	324	333	343	3.5
Other	45	46	62	69	69	69	69	1.4
Battery storage	0	0	0	0	0	0	17	--
Total capacity	1,105	1,307	1,405	1,456	1,493	1,538	1,637	1.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E7.cap. Electricity installed generating capacity: Japan, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	37	37	19	11	6	3	3	-7.7
Natural gas	103	106	106	94	83	74	65	-1.5
Coal	62	67	44	44	44	44	44	-1.1
Nuclear	9	20	25	25	21	18	18	2.5
Renewables	86	89	93	101	118	146	167	2.2
Hydro	22	22	22	22	22	22	22	0.0
Wind	4	7	11	19	36	64	85	11.0
Geothermal	0	0	0	0	0	0	0	0.0
Solar	55	55	55	55	55	55	55	0.0
Other	4	4	4	4	4	4	4	0.1
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	296	319	286	274	273	285	298	0.0

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E8.cap. Electricity installed generating capacity: South Korea, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	5	5	1	0	0	0	0	-13.4
Natural gas	46	49	49	42	37	35	34	-1.0
Coal	42	44	44	44	44	44	44	0.2
Nuclear	24	36	31	30	26	25	25	0.1
Renewables	13	21	34	53	75	86	88	6.7
Hydro	1	2	2	2	2	2	2	1.1
Wind	1	5	13	30	52	63	65	13.6
Geothermal	0	0	0	0	0	0	0	--
Solar	7	11	15	17	17	17	17	3.0
Other	3	3	4	4	4	4	4	1.1
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	130	156	159	171	183	190	191	1.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E9.cap. Electricity installed generating capacity: Australia and New Zealand, Low Oil Price case

gigawatts

Fuel	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Liquid fuels	2	2	0	0	0	0	0	-10.5
Natural gas	22	22	22	17	13	10	10	-2.6
Coal	25	25	25	25	25	25	25	0.0
Nuclear	0	0	0	0	0	0	0	0.0
Renewables	31	63	77	87	96	107	112	4.4
Hydro	11	12	12	13	14	17	18	1.6
Wind	6	19	29	37	42	47	47	6.9
Geothermal	1	1	1	1	1	1	1	0.0
Solar	11	30	35	36	38	42	45	4.7
Other	1	1	1	1	1	1	1	0.0
Battery storage	0	0	0	0	2	4	5	--
Total capacity	79	111	124	129	136	146	152	2.2

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E10.cap. Electricity installed generating capacity: Non-OECD, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	185	186	94	58	46	39	35	-5.4
Natural gas	891	941	995	995	954	939	948	0.2
Coal	1,658	1,733	1,719	1,719	1,720	1,723	1,748	0.2
Nuclear	111	138	166	191	216	234	253	2.8
Renewables	1,275	2,037	2,471	2,839	3,345	3,865	4,282	4.1
Hydro	733	857	911	934	967	979	995	1.0
Wind	253	441	562	701	819	888	913	4.4
Geothermal	5	10	15	17	19	20	20	4.4
Solar	224	647	889	1,084	1,434	1,868	2,242	8.0
Other	59	82	94	103	106	109	112	2.2
Battery storage	0	0	14	28	112	222	321	--
Total capacity	4,121	5,035	5,459	5,830	6,392	7,022	7,587	2.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E11.cap. Electricity installed generating capacity: Russia, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	3	3	1	1	1	1	1	-3.8
Natural gas	134	134	134	124	124	123	123	-0.3
Coal	53	53	53	53	53	53	53	0.0
Nuclear	27	33	32	32	32	32	31	0.4
Renewables	54	55	56	59	61	63	64	0.6
Hydro	52	52	52	53	53	53	54	0.1
Wind	0	0	1	2	3	3	4	15.6
Geothermal	0	0	0	0	0	0	0	0.0
Solar	1	1	2	2	3	3	3	6.4
Other	1	1	2	2	3	3	3	2.3
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	271	278	276	270	271	272	272	0.0

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E12.cap. Electricity installed generating capacity: Other Europe and Eurasia, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	13	13	11	11	11	11	11	-0.7
Natural gas	47	47	47	46	43	41	40	-0.5
Coal	58	58	45	45	46	47	48	-0.6
Nuclear	18	19	21	22	22	22	23	0.8
Renewables	54	62	69	80	95	111	119	2.7
Hydro	42	43	44	44	44	44	44	0.1
Wind	6	10	13	17	20	21	22	4.7
Geothermal	0	0	0	0	0	0	0	--
Solar	5	9	12	17	29	44	52	8.0
Other	1	1	1	1	1	1	1	2.1
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	189	200	194	204	217	232	242	0.8

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E13.cap. Electricity installed generating capacity: China, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	7	7	6	1	0	0	0	-13.6
Natural gas	88	100	153	221	221	221	221	3.1
Coal	1,087	1,101	1,101	1,101	1,101	1,101	1,101	0.0
Nuclear	48	59	77	96	113	129	143	3.7
Renewables	691	1,070	1,230	1,349	1,494	1,608	1,641	2.9
Hydro	322	365	385	398	417	417	417	0.9
Wind	184	291	313	333	333	333	333	2.0
Geothermal	0	0	0	0	0	0	0	0.0
Solar	169	399	510	591	717	830	863	5.6
Other	15	15	22	27	27	27	27	1.9
Battery storage	0	0	0	0	56	116	143	--
Total capacity	1,921	2,337	2,566	2,768	2,985	3,174	3,248	1.8

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E14.cap. Electricity installed generating capacity: India, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	6	6	2	0	0	0	0	-14.6
Natural gas	30	30	30	25	21	18	18	-1.7
Coal	278	302	302	302	302	302	302	0.3
Nuclear	6	9	12	13	18	22	26	4.9
Renewables	119	333	493	615	758	950	1,195	8.0
Hydro	45	73	93	96	98	99	101	2.7
Wind	35	77	139	229	302	333	342	7.9
Geothermal	0	0	0	0	0	0	0	--
Solar	27	168	245	274	339	496	727	11.6
Other	12	16	16	17	19	22	25	2.6
Battery storage	0	0	14	28	56	106	178	--
Total capacity	439	680	853	984	1,156	1,399	1,719	4.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E15.cap. Electricity installed generating capacity: Other Non-OECD Asia, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	42	42	23	11	6	2	0	-17.5
Natural gas	155	170	170	151	135	120	116	-1.0
Coal	124	151	150	150	150	152	176	1.2
Nuclear	6	6	5	5	5	5	5	-0.2
Renewables	92	162	197	240	328	426	471	5.6
Hydro	66	96	107	112	120	123	126	2.1
Wind	3	11	16	27	51	75	77	11.0
Geothermal	4	7	9	9	9	9	9	2.7
Solar	9	22	35	62	117	189	229	11.3
Other	9	27	30	31	31	31	31	4.2
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	419	531	545	558	623	706	770	2.0

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E16.cap. Electricity installed generating capacity: Middle East, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	60	60	32	22	16	13	12	-5.4
Natural gas	244	261	261	234	209	209	209	-0.5
Coal	2	8	8	8	8	8	8	5.1
Nuclear	1	6	9	11	12	12	12	9.1
Renewables	18	48	81	119	184	223	234	8.9
Hydro	15	15	15	15	15	15	15	0.0
Wind	1	10	20	24	25	27	29	13.8
Geothermal	0	0	0	0	0	0	0	--
Solar	2	22	45	79	142	180	190	15.8
Other	0	0	0	0	0	0	0	3.8
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	325	383	391	394	430	466	476	1.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E17.cap. Electricity installed generating capacity: Africa, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	21	21	8	6	6	6	6	-4.2
Natural gas	120	123	124	128	139	146	162	1.0
Coal	48	50	50	50	50	50	50	0.2
Nuclear	2	2	4	6	7	7	7	4.7
Renewables	47	82	114	138	172	217	269	6.0
Hydro	33	42	43	45	48	53	60	2.0
Wind	5	18	30	33	35	38	41	6.9
Geothermal	1	2	5	6	9	9	9	9.1
Solar	6	18	33	50	76	112	155	11.4
Other	2	2	3	4	4	4	4	3.2
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	237	279	301	328	374	427	495	2.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E18.cap. Electricity installed generating capacity: Brazil, Low Oil Price case

gigawatts

Fuel								Average annual
	2020	2025	2030	2035	2040	2045	2050	percentage change, 2020–2050
Liquid fuels	9	9	2	0	0	0	0	-14.6
Natural gas	14	16	16	12	9	7	5	-3.2
Coal	4	4	4	4	4	4	4	0.0
Nuclear	2	2	3	3	3	2	2	0.9
Renewables	136	142	147	156	168	178	186	1.1
Hydro	104	105	106	106	106	106	106	0.1
Wind	14	18	21	29	41	50	58	4.8
Geothermal	0	0	0	0	0	0	0	0.0
Solar	2	4	4	4	5	5	5	3.3
Other	15	15	16	17	17	17	17	0.4
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	165	173	172	175	184	191	198	0.6

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lp_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.

Table E19.cap. Electricity installed generating capacity: Other Non-OECD Americas, Low Oil Price case

gigawatts

Fuel	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Liquid fuels	24	24	10	6	6	6	6	-4.6
Natural gas	58	60	60	53	53	53	53	-0.3
Coal	5	5	5	5	5	5	5	0.0
Nuclear	2	2	2	2	2	2	2	0.9
Renewables	66	82	83	84	85	90	101	1.5
Hydro	54	66	66	66	67	68	71	0.9
Wind	4	7	8	8	8	8	8	1.9
Geothermal	1	1	1	1	1	1	1	2.0
Solar	2	4	4	4	5	9	16	6.5
Other	4	4	4	5	5	5	5	0.4
Battery storage	0	0	0	0	0	0	0	0.0
Total capacity	155	173	161	150	152	157	168	0.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Ip_210720.081941.

Notes:

* Totals may not equal sum of components due to independent rounding.