



Net-Zero America

State-level health, employment, and land use impacts

This document provides state-by-state health, employment, and land-use impacts in modeled net-zero emissions scenarios relative to the REF scenario. One table reports results for 2030 and the other reports results for 2050. “Lowest” and “Highest” column headings correspond to the net-zero scenarios with the smallest and largest impacts, respectively. In the case of fossil-fuel supply jobs, “lowest” and “highest” correspond to the most-negative and least-negative change in number of jobs, respectively. Also, when values in the column for net change in *total* number of jobs do not equal the sum of the values in the columns for changes in fossil and non-fossil jobs, the *total* value corresponds to a different net-zero scenario than one or both of the scenarios to which the fossil and non-fossil job values correspond.

Range of changes in net-zero scenarios for key metrics >>>	2030															
	Health Impacts				Land Use Impacts						Employment Impacts					
	Premature deaths avoided, Cumulative 2020-2030		Value of avoided premature deaths, million 2019\$		Land area of utility-scale solar PV farms, km ²		Land area of wind farms (visual extent), km ²		Land area of utility-scale solar and wind farms, km ²		Net change in number of jobs in fossil fuel supply sectors		Net change in number of energy-supply jobs in non-fossil fuel sectors		Net change in total number of energy-supply jobs	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
Alabama	1,075	1,132	9,526	10,030	24	193	-	-	24	193	(4,337)	(3,518)	1,799	16,587	(1,719)	12,977
Arizona	247	325	2,185	2,878	45	45	296	351	341	396	(2,116)	(1,486)	2,848	5,813	845	3,962
Arkansas	904	934	8,013	8,281	32	76	1,219	3,332	1,250	3,409	(4,063)	(2,772)	938	5,964	(3,125)	1,991
California	329	2,357	2,917	20,927	540	768	1,234	1,263	1,774	2,031	(6,492)	(5,638)	47,208	79,751	40,819	73,259
Colorado	447	532	3,959	4,718	36	96	3,539	3,749	3,576	3,845	(5,387)	(3,894)	12,522	23,766	8,629	18,634
Connecticut	615	695	5,447	6,162	68	95	42	117	111	212	(845)	(219)	2,875	7,150	2,656	6,429
Delaware	208	225	1,846	1,991	1	8	0	0	1	8	(347)	(311)	49	1,885	(262)	1,538
District of Columbia	114	145	1,007	1,282												
Florida	1,540	1,819	13,647	16,129	733	906	-	-	733	906	(6,137)	(1,030)	48,597	70,373	47,567	65,754
Georgia	1,378	1,567	12,213	13,895	60	222	-	-	60	222	(4,508)	(1,915)	4,594	16,669	2,679	12,375
Idaho	46	54	408	476	0	0	3,594	5,145	3,594	5,145	(345)	(269)	4,003	7,103	3,734	6,758
Illinois	2,703	3,019	23,956	26,759	97	144	7,462	13,780	7,559	13,924	(6,525)	(4,778)	27,268	36,117	22,490	30,003
Indiana	1,773	1,866	15,713	16,537	49	437	4,595	11,700	4,644	12,137	(6,067)	(5,789)	7,017	44,828	1,229	38,908
Iowa	603	625	5,346	5,538	39	123	7,378	10,151	7,417	10,274	(2,511)	(1,359)	24,103	48,541	22,743	46,295
Kansas	490	518	4,345	4,595	1	1	2,878	3,144	2,878	3,144	(2,329)	(1,493)	15,807	24,317	14,313	22,064
Kentucky	1,225	1,283	10,853	11,370	2	2	-	-	2	2	(5,456)	(4,661)	(1,191)	10,353	(6,648)	5,106
Louisiana	1,005	1,047	8,908	9,284	164	263	-	-	164	263	(13,185)	(7,334)	4,516	19,015	(7,808)	7,460
Maine	213	229	1,891	2,025	2	2	184	184	187	187	(242)	(36)	2,392	4,520	2,273	4,483
Maryland	1,164	1,314	10,319	11,649	47	146	6	6	53	151	(1,339)	(1,160)	916	7,620	(421)	6,461
Massachusetts	946	1,117	8,382	9,906	36	61	156	286	192	347	(1,215)	(650)	9,532	12,548	8,882	11,332
Michigan	2,205	2,340	19,540	20,739	2	61	2,917	5,621	2,919	5,681	(3,807)	(2,816)	6,172	15,987	3,356	12,546
Minnesota	550	621	4,878	5,508	7	7	5,562	7,663	5,569	7,669	(2,017)	(1,208)	9,133	14,743	7,925	12,726
Mississippi	679	699	6,017	6,193	22	104	-	-	22	104	(2,147)	(1,058)	5,991	11,428	4,053	9,564
Missouri	1,585	1,656	14,048	14,676	327	486	10,287	15,922	10,614	16,409	(2,248)	(1,167)	24,309	36,034	23,142	33,786
Montana	45	47	399	417	-	-	1,395	2,411	1,395	2,411	(1,747)	(1,521)	4,658	7,713	3,137	6,014
Nebraska	269	289	2,388	2,559	122	278	2,463	6,020	2,585	6,297	(1,275)	(939)	13,852	32,112	12,913	30,866
Nevada	58	90	518	802	82	129	633	1,715	715	1,844	(962)	279	4,346	6,866	3,488	6,358
New Hampshire	277	301	2,459	2,671	-	19	318	559	318	578	(421)	(126)	488	2,588	362	2,167
New Jersey	1,536	1,819	13,611	16,129	34	93	0	0	34	93	(2,162)	(1,629)	5,719	14,773	4,085	12,845
New Mexico	133	156	1,178	1,385	372	511	6,321	12,603	6,693	13,114	(3,684)	(2,320)	23,866	43,008	21,546	39,548
New York	3,302	3,918	29,267	34,736	79	335	1,265	2,046	1,344	2,381	(3,657)	(2,037)	9,538	29,720	7,501	26,063
North Carolina	1,539	1,707	13,643	15,135	69	404	100	128	169	532	(2,574)	84	5,469	28,363	5,553	25,789
North Dakota	54	57	482	502	-	-	2,355	2,355	2,355	2,355	(2,902)	(2,103)	5,633	13,086	3,530	10,319
Ohio	3,255	3,479	28,853	30,839	16	83	409	3,519	424	3,601	(6,555)	(4,363)	5,173	12,413	810	5,873
Oklahoma	815	880	7,222	7,799	6	6	4,662	8,381	4,668	8,387	(10,390)	(5,713)	21,853	41,343	16,140	30,953
Oregon	86	111	760	985	22	112	1,594	1,830	1,616	1,942	(828)	(515)	7,741	12,621	7,226	11,794
Pennsylvania	3,960	4,248	35,100	37,657	19	133	415	415	434	548	(12,411)	(8,880)	6,853	23,337	(2,027)	11,581
Rhode Island	164	191	1,457	1,693	3	17	8	8	11	25	(328)	27	423	1,658	450	1,399
South Carolina	703	758	6,228	6,719	376	941	-	-	376	941	(2,175)	(1,313)	13,301	56,763	11,988	55,058
South Dakota	87	91	774	809	-	-	1,367	2,657	1,367	2,657	(356)	(283)	1,815	4,251	1,532	3,904
Tennessee	1,630	1,709	14,449	15,146	13	43	18	33	31	76	(1,388)	(478)	2,626	4,544	2,148	3,752
Texas	3,861	4,182	34,226	37,073	1,099	1,293	18,914	29,995	20,014	31,287	(51,366)	(36,159)	81,993	182,276	45,834	134,446
Utah	109	145	969	1,290	20	111	767	2,723	787	2,834	(2,880)	(2,171)	7,461	10,269	4,756	7,388
Vermont	112	117	992	1,041	1	1	179	319	180	320	(86)	(45)	721	1,677	651	1,591
Virginia	1,430	1,496	12,672	13,256	368	706	909	3,015	1,277	3,721	(3,284)	(2,393)	17,808	46,534	15,415	43,250
Washington	216	286	1,918	2,536	4	4	989	1,052	993	1,056	(1,091)	(885)	10,322	18,157	9,402	17,272
West Virginia	763	819	6,760	7,260	-	7	1,452	3,172	1,452	3,179	(7,676)	(6,801)	563	5,897	(6,238)	(1,521)
Wisconsin	1,020	1,076	9,038	9,535	11	15	851	1,314	861	1,329	(2,673)	(1,588)	981	2,935	(1,692)	863
Wyoming	53	56	468	499	-	15	3,729	5,608	3,729	5,623	(8,018)	(6,567)	4,453	10,139	(2,114)	2,458
Continental U.S.	47,760	54,091	423,303	479,519	5,788	8,671	102,464	174,291	108,251	182,962	(208,940)	(131,177)	540,362	1,060,079	409,185	852,651

2050																
Range of changes in net-zero scenarios for key metrics >>>	Health Impacts				Land Use Impacts						Employment Impacts					
	Premature deaths avoided, Cumulative 2020-2050		Value of avoided premature deaths, million 2019\$		Land area of utility-scale solar PV farms, km ²		Land area of wind farms (visual extent), km ²		Land area of utility-scale solar and wind farms, km ²		Net change in jobs in fossil fuel supply sectors		Net change in energy-supply jobs in non-fossil fuel sectors		Net change in total number of energy-supply jobs	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
Alabama	4,235	5,438	37,551	48,242	314	3,675	-	-	314	3,675	(10,871)	(7,706)	34,222	136,683	26,517	125,812
Arizona	2,091	3,954	18,560	35,108	45	399	485	1,210	531	1,608	(5,245)	(2,480)	2,470	19,644	(2,004)	14,399
Arkansas	2,919	3,574	25,884	31,699	90	521	8,236	37,849	8,326	38,370	(8,112)	(5,131)	15,031	50,150	9,900	42,038
California	29,934	70,083	265,845	622,554	2,168	5,389	1,248	1,404	3,417	6,793	(53,329)	(28,542)	96,109	409,679	66,269	356,350
Colorado	3,769	5,682	33,456	50,443	234	1,360	4,623	22,700	4,858	24,059	(23,507)	(12,204)	24,019	206,521	11,815	183,014
Connecticut	3,085	4,813	27,360	42,703	99	179	117	216	216	395	(3,127)	(2,122)	5,079	8,771	2,957	5,644
Delaware	1,010	1,363	8,954	12,094	1	81	0	48	1	129	(1,166)	(843)	2,006	13,044	1,163	11,954
District of Columbia	749	1,260	6,649	11,182												
Florida	9,780	16,796	86,782	149,130	767	6,720	-	-	767	6,720	(17,522)	(12,249)	53,423	279,094	41,174	262,254
Georgia	7,706	12,479	68,364	110,772	810	3,794	-	-	810	3,794	(11,176)	(7,374)	38,292	141,191	30,918	130,015
Idaho	289	505	2,565	4,485	0	0	7,626	20,337	7,626	20,337	(1,595)	(1,038)	3,150	29,966	2,047	28,371
Illinois	11,964	20,046	106,121	177,871	301	730	22,199	58,046	22,500	58,776	(14,345)	(10,673)	47,659	179,693	36,986	165,348
Indiana	6,910	9,478	61,274	84,087	310	1,967	5,736	19,253	6,046	21,220	(10,690)	(6,888)	65,599	181,395	58,495	170,705
Iowa	1,957	2,562	17,355	22,725	77	657	18,337	79,145	18,414	79,802	(5,260)	(2,981)	34,362	271,724	31,143	266,464
Kansas	1,953	2,777	17,327	24,646	1	3	3,468	30,413	3,469	30,416	(9,771)	(5,234)	17,686	145,332	12,164	135,561
Kentucky	5,447	7,078	48,301	62,792	2	155	-	194	2	349	(6,767)	(4,098)	6,448	33,340	333	29,243
Louisiana	3,353	4,448	29,740	39,462	184	294	-	9,393	184	9,686	(45,337)	(25,025)	11,311	55,306	(13,714)	9,969
Maine	813	1,155	7,210	10,248	2	361	184	199	187	561	(1,612)	(798)	4,296	103,638	3,229	102,026
Maryland	6,263	9,348	55,551	82,953	61	656	6	1,714	67	2,370	(4,017)	(2,586)	7,566	43,544	4,979	39,527
Massachusetts	4,697	8,476	41,664	75,199	126	416	286	465	412	881	(5,232)	(3,682)	(5,674)	(1,542)	(9,630)	(6,703)
Michigan	8,699	12,586	77,143	111,664	29	1,290	3,380	11,764	3,409	13,054	(12,368)	(7,906)	30,912	93,123	23,006	80,755
Minnesota	2,807	4,983	24,911	44,241	7	78	12,760	48,339	12,766	48,417	(6,359)	(4,067)	39,961	160,373	35,781	154,014
Mississippi	2,266	2,863	20,097	25,399	215	2,064	-	12,409	215	14,473	(10,301)	(5,962)	13,545	102,726	7,583	92,425
Missouri	5,272	7,176	46,754	63,666	924	2,123	26,212	73,919	27,136	76,042	(4,863)	(3,443)	23,300	131,687	19,857	126,825
Montana	168	233	1,491	2,070	-	-	11,647	65,132	11,647	65,132	(2,578)	(1,375)	7,111	62,705	5,481	60,127
Nebraska	1,036	1,424	9,191	12,634	237	1,920	14,569	73,152	14,806	75,072	(2,728)	(1,650)	32,745	219,289	30,743	216,561
Nevada	775	1,604	6,881	14,244	322	897	3,252	8,137	3,574	9,034	(3,298)	(1,688)	9,126	34,289	7,437	30,990
New Hampshire	1,059	1,604	9,389	14,229	22	344	548	950	570	1,294	(1,403)	(718)	5,142	44,743	4,407	44,025
New Jersey	10,406	17,147	92,299	152,152	54	231	0	158	54	389	(9,638)	(6,140)	(12,337)	19,040	(18,477)	11,091
New Mexico	984	1,495	8,731	13,268	911	1,158	20,310	38,523	21,221	39,681	(21,257)	(10,731)	29,260	97,822	18,493	76,566
New York	23,170	40,122	205,497	355,952	476	1,120	3,888	6,463	4,364	7,583	(16,952)	(10,971)	48,722	138,738	37,751	121,786
North Carolina	7,976	11,713	70,743	103,946	632	1,461	117	166	749	1,627	(8,102)	(4,707)	28,238	82,252	21,217	74,150
North Dakota	195	318	1,729	2,825	-	-	2,535	20,374	2,535	20,374	(19,900)	(8,075)	21,519	106,390	11,093	86,490
Ohio	15,512	21,285	137,569	188,833	49	1,239	463	15,894	512	17,133	(25,469)	(13,791)	50,214	79,316	29,918	53,848
Oklahoma	3,478	4,923	30,851	43,685	39	339	11,978	49,840	12,017	50,179	(49,848)	(26,964)	28,761	263,280	1,797	213,432
Oregon	553	1,085	4,905	9,638	22	482	2,286	6,301	2,308	6,783	(3,192)	(2,090)	18,465	143,173	16,312	139,981
Pennsylvania	20,773	27,664	184,254	245,439	83	2,499	415	28,172	498	30,670	(36,046)	(18,216)	36,280	163,332	18,065	127,286
Rhode Island	834	1,416	7,393	12,564	3	17	8	8	11	25	(1,336)	(1,087)	1,103	2,814	16	1,478
South Carolina	3,282	4,663	29,107	41,377	1,070	2,178	-	-	1,070	2,178	(5,355)	(3,406)	36,680	68,134	33,274	62,779
South Dakota	296	385	2,626	3,417	2	10	3,860	35,002	3,862	35,012	(1,405)	(820)	15,146	45,321	14,326	43,916
Tennessee	6,326	8,374	56,093	74,292	70	2,024	33	33	103	2,057	(5,896)	(3,983)	19,394	80,170	15,412	74,275
Texas	17,556	26,525	155,769	235,432	2,289	7,173	32,377	127,200	34,666	134,374	(275,941)	(142,808)	108,464	1,004,840	(34,344)	728,899
Utah	1,143	2,246	10,145	19,948	35	221	4,424	8,113	4,459	8,334	(7,556)	(4,260)	5,240	35,615	981	28,059
Vermont	433	550	3,839	4,880	1	479	319	724	320	1,204	(724)	(290)	1,291	27,017	950	26,293
Virginia	5,875	7,245	52,086	64,253	708	3,924	1,120	10,135	1,829	14,059	(9,160)	(5,133)	19,070	218,999	13,937	209,840
Washington	1,468	3,116	13,034	27,672	4	120	1,311	5,998	1,315	6,118	(5,740)	(3,245)	14,863	113,007	11,618	107,267
West Virginia	3,533	4,293	31,329	38,076	-	491	1,699	19,928	1,699	20,419	(12,027)	(7,396)	24,086	44,466	15,532	32,433
Wisconsin	3,689	5,357	32,715	47,527	13	182	2,082	22,250	2,095	22,432	(6,692)	(4,191)	23,394	53,136	19,202	46,445
Wyoming	226	301	2,006	2,667	-	244	10,176	31,647	10,176	31,891	(15,337)	(8,795)	7,537	76,562	(1,258)	61,225
Continental U.S.	258,921	414,016	2,296,927	3,674,384	14,241	61,212	244,323	1,003,317	258,563	1,064,529	(835,335)	(474,871)	1,252,047	5,995,459	777,176	5,160,124