

se04.d111809a	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Report	Annual Energy Outlook 2010																												
Scenario	aec2010r				Reference case																								
Date/Key	d111809a																												
Release Date	December 2009																												

Table 90. Renewable Energy Generation by Fuel
Mid-Atlantic Area Council

Fuels	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2008-2035	
Electric Power Sector 1/																															
Generating Capacity (gigawatts)																															
Conventional Hydropower	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	0.0%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Municipal Waste 3/	0.74	0.73	0.73	0.79	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.6%	
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.42	1.57	1.71	1.71	1.71	1.71	1.71	1.71	1.79	1.85	1.85	1.85	2.42	2.42	2.51	2.61	2.61	2.71	2.99	3.39	3.98	20.2%		
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	
Wind	0.30	0.53	0.81	0.81	0.84	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	4.3%	
Offshore Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	--	
Total	2.28	2.51	2.78	2.84	2.94	3.75	4.14	5.49	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.71	5.78	5.78	5.78	5.78	6.34	6.34	6.44	6.54	6.54	6.63	6.91	7.32	7.90	4.3%	
Electricity Generation (billion kilowatthours)																															
Conventional Hydropower	3.54	4.03	4.19	4.22	4.28	4.35	4.43	4.49	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	0.5%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Biogenic Municipal Waste 6/	2.64	2.92	3.09	3.49	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	1.3%	
Wood and Other Biomass 4/	0.19	0.20	0.11	0.26	0.30	11.09	13.88	16.04	18.10	21.80	24.17	27.75	30.67	31.61	31.78	32.42	33.12	33.39	32.72	32.75	36.73	37.18	37.31	37.62	37.73	37.99	38.33	39.00	39.26	21.6%	
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Wind	0.47	1.11	1.60	2.19	2.31	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	5.4%	
Offshore Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	--	
Total	6.85	8.26	9.00	10.17	11.00	24.18	27.04	29.91	32.15	35.84	38.21	41.79	44.72	45.65	45.83	46.46	47.16	47.44	46.77	46.79	50.78	51.22	51.36	51.66	51.77	52.03	52.37	53.05	53.30	7.2%	
Energy Consumption 7/ (quadrillion Btu)																															
Conventional Hydropower	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Biogenic Municipal Waste 6/	0.04	0.04	0.04	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1.3%	
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.11	0.14	0.15	0.17	0.21	0.23	0.26	0.29	0.30	0.30	0.31	0.31	0.32	0.31	0.31	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.34	--	--	
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Wind	0.00	0.01	0.02	0.02	0.02	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5.4%	
Offshore Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	--	
Total	0.08	0.09	0.10	0.11	0.13	0.26	0.28	0.30	0.32	0.36	0.38	0.42	0.45	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	6.5%	
End-Use Generators 8/																															
Generating Capacity (gigawatts)																															
Conventional Hydropower 9/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Municipal Waste	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.0%	
Wood and Other Biomass 4/	0.09	0.09	0.09	0.09	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19	2.8%	
Solar Photovoltaic 5/	0.03	0.05	0.10	0.17	0.27	0.40	0.54	0.69	0.85	1.04	1.04	1.05	1.05	1.06	1.07	1.08	1.10	1.11	1.12	1.14	1.16	1.19	1.24	1.30	1.36	1.42	1.48	1.54	1.61	13.3%	
Wind	0.00	0.00	0.02	0.05	0.08	0.12	0.17	0.23	0.31	0.39	0.40	0.40	0.41	0.42	0.42	0.43	0.44	0.44	0.44	0.45	0.46	0.47	0.48	0.48	0.49	0.50	0.51	0.53	0.54	27.7%	
Total	0.16	0.18	0.24	0.34	0.48	0.66	0.86	1.07	1.32	1.60	1.61	1.62	1.64	1.65	1.67	1.70	1.72	1.74	1.77	1.79	1.83	1.87	1.93	1.99	2.06	2.13	2.21	2.29	2.37	10.1%	
Electricity Generation (billion kilowatthours)																															
Conventional Hydropower 9/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	
Municipal Waste	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Wood and Other Biomass 4/	0.63	0.65	0.65	0.67	0.70	0.77	0.82	0.86	0.88	0.91	0.94	0.96	0.99	1.02	1.03	1.06	1.09	1.11	1.12	1.14	1.15	1.16	1.17	1.18	1.19	1.21	1.22	1.24	1.27	2.5%	
Solar Photovoltaic 5/	0.04	0.07	0.14	0.24	0.39	0.57	0.78	1.00	1.25	1.52	1.53	1.54	1.55	1.56	1.57	1.59	1.61	1.63	1.65	1.68	1.71	1.76	1.83	1.92	2.00	2.09	2.18	2.28	2.38	13.8%	
Wind	0.00	0.00	0.03	0.07	0.12	0.18	0.25	0.33	0.45	0.57	0.58	0.58	0.59	0.59	0.60	0.61	0.62	0.64	0.65	0.66	0.67	0.68	0.69	0.71	0.72	0.73	0.75	0.77	0.79	28.3%	
Total	0.91	0.98	1.07	1.23	1.46	1.77	2.10	2.44	2.83	3.25	3.29	3.33	3.37	3.42	3.46	3.52	3.58	3.63	3.67	3.72	3.78	3.85	3.95	4.05	4.17	4.29	4.41	4.54	4.69	6.0%	
Energy Consumption (quadrillion Btu)																															
Conventional Hydropower 9/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	
Geothermal 2/	0.00	0.00	0.00	0.00	0.00	0																									

using the fossil fuel equivalent of 9,884 Btu per kilowatthour.

8/ Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors; and small on-site generating systems in the residential, Commercial, and industrial sectors used primarily for own-use generation, but which may also sell some power to the grid.

9/ Represents own-use industrial hydroelectric power.

Note: Totals may not equal sum of components due to independent rounding. Data for 2008 are model results and may differ slightly from official EIA data reports.

Sources: 2007 and 2008 generation: EIA, Annual Energy Review 2008, DOE/EIA-0384(2008) (Washington, DC, June 2009).

Projections: EIA, AEO2010 National Energy Modeling System run aeo2010r.d11809a.