



# *Supplemental Tables to the Annual Energy Outlook 2008*

## **Part 3: Electricity Generation & Renewable Resource Data**



Energy Information Administration

Table 62. Electric Power Projections for EMM Region  
 East Central Area Reliability Coordinaiton Agreement - 01

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	84.03	83.80	84.38	83.75	83.95	84.69	85.32	85.32	85.32	86.04	84.78	84.69	84.69
Oil and Natural Gas Steam 2/	3.51	3.51	3.46	3.46	3.46	3.46	3.42	1.23	1.20	1.20	1.20	1.20	1.20
Combined Cycle	11.45	11.45	11.45	12.13	12.13	12.13	12.13	12.67	12.67	12.67	12.67	12.67	12.67
Combustion Turbine/Diesel	21.08	21.01	21.02	21.02	21.02	21.02	21.02	17.66	17.66	17.66	17.66	17.66	17.66
Nuclear Power	7.81	7.81	7.82	7.82	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89
Pumped Storage/Other 3/	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Fuel Cells	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
Renewable Sources 4/	1.54	1.54	1.71	2.12	2.14	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
Distributed Generation 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
Total Capacity	133.07	132.78	133.50	133.96	134.25	135.03	135.62	130.61	130.58	131.30	130.04	129.95	129.95
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.28	1.01	1.76	1.76	1.76	2.51	2.51	2.51	2.51
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.68	0.68	0.68	0.68	1.22	1.22	1.22	1.22	1.22	1.22
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.21	0.62	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Distributed Generation 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
Total Planned Additions	0.00	0.00	0.18	1.27	1.57	2.30	3.05	3.59	3.59	4.34	4.34	4.34	4.34
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Cumulative Total Additions	0.00	0.00	0.18	1.27	1.57	2.35	3.10	3.64	3.64	4.39	4.39	4.39	4.39

Table 62. Electric Power Projections for EMM Region  
East Central Area Reliability Coordination Agreement - 01

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.00	0.04	0.12	0.12	0.24	0.24	0.24	0.27	1.53	1.62	1.62
Oil and Natural Gas Steam 3/	0.00	0.00	0.06	0.06	0.06	0.06	0.10	2.28	2.32	2.32	2.32	2.32	2.32
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	3.37	3.37	3.37	3.37	3.37
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.06	0.10	0.18	0.18	0.34	5.89	5.92	5.95	7.21	7.30	7.30
<b>End-Use Sectors 8/</b>													
Coal	0.70	0.68	0.68	0.68	0.68	0.68	0.80	0.86	0.68	0.68	0.76	0.90	1.38
Petroleum	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Natural Gas	0.17	0.17	0.17	0.18	0.24	0.24	0.25	0.26	0.26	0.27	0.28	0.28	0.29
Other Gaseous Fuels	1.05	0.91	0.90	0.90	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Renewable Sources 4/	0.30	0.30	0.31	0.31	0.31	0.32	0.33	0.33	0.57	0.65	0.67	0.74	0.60
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	2.29	2.13	2.13	2.14	2.12	2.14	2.26	2.34	2.40	2.49	2.60	2.82	3.17
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	182.69	176.00	184.80	185.55	187.21	189.15	190.28	191.95	187.28	187.28	187.79	189.16	189.77
Commercial/Other	152.90	152.84	159.25	160.12	162.18	163.75	166.16	168.70	171.72	175.16	178.45	181.62	184.49
Industrial	207.22	202.26	204.30	205.31	206.62	210.93	214.44	215.79	215.75	215.66	216.35	216.95	216.94
Transportation	0.83	0.84	0.87	0.89	0.89	0.89	0.90	0.91	0.92	0.92	0.93	0.94	0.95
Total Sales	543.64	531.95	549.22	551.87	556.90	564.72	571.78	577.35	575.67	579.02	583.52	588.66	592.15
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	1.77	1.26	0.24	0.06	0.00	0.03	0.01	0.01	0.06	0.11	0.06	0.05	0.55
Gross International Exports	5.09	2.83	2.62	2.26	2.34	2.37	2.30	2.23	2.17	2.10	2.04	1.98	1.92
Gross Interregional Electricity Imports	11.01	6.42	5.75	5.71	12.09	14.28	16.59	19.78	19.20	17.77	20.80	20.46	17.83
Gross Interregional Electricity Exports	54.51	40.34	36.30	31.86	42.96	43.22	47.33	54.44	62.00	65.57	64.37	64.14	63.23
Purchases from Combined Heat and Power 8/	1.05	0.97	0.85	0.86	0.87	0.89	1.17	1.34	1.48	1.68	1.91	2.45	3.29
Electric Power Sector Generation for Custome	608.62	596.46	619.51	616.99	627.03	632.44	640.46	649.05	654.15	661.39	660.66	665.61	669.62
Total Net Energy for Load	562.84	561.94	587.43	589.50	594.69	602.05	608.59	613.52	610.72	613.28	617.02	622.45	626.14
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	515.04	511.48	516.34	510.67	515.57	523.08	531.02	539.22	544.72	551.86	550.27	554.85	558.69
Petroleum	6.40	5.33	3.26	3.19	3.35	3.32	3.60	3.69	3.72	3.40	3.13	3.14	3.13
Natural Gas	21.92	18.19	35.35	38.00	42.32	40.08	39.96	40.16	39.73	40.20	41.31	41.63	41.90
Nuclear	61.65	58.05	61.23	61.08	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02
Pumped Storage/Other 9/	-1.13	-1.41	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Renewable Sources 10/	6.20	6.22	5.76	6.48	7.20	7.36	7.28	7.38	7.38	7.34	7.35	7.39	7.31
Total Generation	610.08	597.85	620.94	618.42	628.46	633.87	641.88	650.48	655.58	662.82	662.09	667.04	671.05
Sales to Customers	608.62	596.46	619.51	616.99	627.03	632.44	640.46	649.05	654.15	661.39	660.66	665.61	669.62
Generation for Own Use	1.47	1.40	1.42	1.42	1.42	1.43	1.43	1.42	1.43	1.43	1.43	1.43	1.43
Distributed Generation 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

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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	3.80	3.80	3.80	3.80	3.80	3.80	4.67	5.17	3.80	3.80	4.40	5.46	9.00
Petroleum	0.13	0.12	0.12	0.12	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Natural Gas	0.85	0.78	0.82	0.85	1.28	1.32	1.37	1.42	1.47	1.52	1.58	1.64	1.70
Other Gaseous Fuels	3.54	3.62	3.65	3.65	3.28	3.28	3.27	3.29	3.28	3.28	3.29	3.29	3.28
Renewable Sources 10/	1.80	1.70	1.70	1.71	1.72	1.76	1.78	1.80	3.59	4.20	4.34	4.84	3.81
Other	0.99	0.58	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Total	11.10	10.60	10.54	10.58	10.67	10.76	11.69	12.27	12.74	13.39	14.20	15.82	18.38
Sales to Utilities	1.05	0.97	0.85	0.86	0.87	0.89	1.17	1.34	1.48	1.68	1.91	2.45	3.29
Generation for Own Use	10.05	9.63	9.69	9.72	9.80	9.87	10.52	10.93	11.26	11.72	12.29	13.37	15.09
<b>Total Electricity Generation</b>	<b>621.18</b>	<b>608.46</b>	<b>631.48</b>	<b>629.00</b>	<b>639.13</b>	<b>644.62</b>	<b>653.57</b>	<b>662.75</b>	<b>668.31</b>	<b>676.21</b>	<b>676.29</b>	<b>682.86</b>	<b>689.43</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	7.9	8.4	9.5	9.5	9.8	9.7	9.6	9.5	9.3	9.2	9.2	9.3	9.3
Commercial	7.2	7.5	8.9	9.0	9.2	9.1	8.9	8.7	8.4	8.2	8.2	8.2	8.3
Industrial	4.7	5.0	6.1	6.4	6.6	6.4	6.2	6.0	5.8	5.6	5.6	5.6	5.7
Transportation	8.0	8.0	7.7	8.1	8.4	8.3	8.1	8.0	7.7	7.6	7.6	7.6	7.6
All Sectors Average	6.5	6.9	8.0	8.2	8.5	8.3	8.1	8.0	7.7	7.6	7.6	7.6	7.6
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	4.4	4.7	5.9	6.1	6.3	6.1	5.9	5.7	5.5	5.3	5.3	5.3	5.4
Transmission	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Distribution	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	5.25	5.22	5.10	5.05	5.09	5.17	5.25	5.34	5.39	5.46	5.44	5.49	5.53
Natural Gas	0.23	0.19	0.30	0.32	0.36	0.33	0.33	0.33	0.33	0.33	0.34	0.34	0.35
Oil	0.07	0.06	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.03
Total	5.54	5.47	5.44	5.40	5.48	5.54	5.62	5.70	5.76	5.82	5.82	5.86	5.90
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.78	1.74	1.75	1.79	1.85	1.85	1.83	1.79	1.77	1.74	1.72	1.71	1.70
Natural Gas	7.30	6.61	6.43	6.53	6.60	6.23	5.90	5.68	5.41	5.23	5.11	5.07	5.12
Distillate Fuel Oil	13.03	13.75	14.92	17.41	14.25	13.59	12.84	12.05	11.35	11.07	10.50	10.07	10.09
Residual Fuel Oil	7.76	7.83	8.30	10.05	10.89	10.13	9.59	6.98	4.29	1.60	-1.04	-3.69	-3.56
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.89	1.89
<b>Emissions 12/</b>													
Total Carbon (million tons)	152.94	148.19	151.61	150.41	152.37	154.07	156.45	158.76	160.34	162.29	161.87	163.24	164.38
Carbon Dioxide (million tons)	560.79	543.38	555.89	551.51	558.69	564.94	573.66	582.12	587.92	595.05	593.51	598.55	602.72
Sulfur Dioxide (million tons)	3.10	2.94	2.91	2.51	2.10	1.71	1.42	1.30	1.22	1.25	1.22	1.17	1.16
Nitrogen Oxide (million tons)	0.88	0.85	0.87	0.85	0.43	0.40	0.40	0.40	0.40	0.40	0.32	0.32	0.33
Mercury (tons)	11.94	12.32	12.41	11.63	10.51	7.98	7.94	7.48	7.41	5.66	5.19	4.78	4.67

Table 62. Electric Power Projections for EMM Region  
 East Central Area Reliability Coordinaiton Agreement - 01

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	0.0%
Oil and Natural Gas Steam 2/	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	-4.4%
Combined Cycle	12.67	12.67	12.67	12.67	12.89	14.12	15.48	16.02	16.09	16.29	16.43	16.61	17.66	1.8%
Combustion Turbine/Diesel	17.66	17.66	17.66	17.66	17.66	17.66	17.66	18.30	19.58	20.72	21.89	22.96	23.13	0.4%
Nuclear Power	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	0.0%
Pumped Storage/Other 3/	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	0.0%
Fuel Cells	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	--
Renewable Sources 4/	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.5%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.07	0.09	--
Total Capacity	129.95	129.95	129.95	129.95	130.16	131.39	132.75	133.94	135.29	136.65	137.99	139.26	140.50	0.2%
<b>Cumulative Planned Additions 6/</b>														
Coal	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	--
Oil and Natural Gas Steam 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	--
Combined Cycle	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	--
Distributed Generation 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	--
Total Planned Additions	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.00	0.00	0.00	0.00	0.21	1.44	2.80	3.35	3.42	3.62	3.76	3.94	4.99	--
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	1.92	3.06	4.24	5.30	5.48	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.07	0.09	--
Total Unplanned Additions	0.05	0.05	0.05	0.05	0.26	1.49	2.85	4.04	5.39	6.75	8.09	9.36	10.60	--
Cumulative Total Additions	4.39	4.39	4.39	4.39	4.60	5.84	7.20	8.39	9.74	11.10	12.44	13.70	14.94	--

Table 62. Electric Power Projections for EMM Region  
East Central Area Reliability Coordinaiton Agreement - 01

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	--
Oil and Natural Gas Steam 3/	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	--
Combined Cycle	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	--
Combustion Turbine/Diesel	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	--
<b>End-Use Sectors 8/</b>														
Coal	1.25	0.85	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.0%
Petroleum	0.06	0.06	0.06	0.12	0.12	0.12	0.10	0.10	0.10	0.11	0.11	0.11	0.11	3.0%
Natural Gas	0.30	0.31	0.32	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.42	0.43	0.45	4.2%
Other Gaseous Fuels	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	-0.5%
Renewable Sources 4/	0.77	1.19	1.57	2.00	2.49	2.86	3.33	3.86	4.18	4.20	4.22	4.24	4.26	11.6%
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Total	3.21	3.24	3.46	3.97	4.47	4.85	5.31	5.85	6.18	6.22	6.25	6.29	6.33	4.6%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	190.86	191.99	192.79	193.32	194.78	196.37	198.61	200.05	202.14	204.26	206.77	208.25	210.22	0.7%
Commercial/Other	187.21	190.00	192.79	195.75	198.59	201.36	204.15	206.96	209.82	212.71	215.49	218.26	220.89	1.5%
Industrial	216.57	215.92	215.23	214.77	213.57	212.70	211.89	211.17	210.71	210.07	208.92	207.73	206.80	0.1%
Transportation	0.96	0.97	0.98	0.99	0.99	1.02	1.02	1.03	1.04	1.05	1.06	1.06	1.07	1.0%
Total Sales	595.59	598.88	601.79	604.83	607.93	611.45	615.68	619.22	623.70	628.08	632.23	635.31	638.99	0.8%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	0.14	0.20	0.05	0.32	0.35	0.44	0.18	0.18	0.37	0.18	0.32	2.61	2.87	3.5%
Gross International Exports	1.86	1.81	1.75	1.70	1.64	1.59	1.54	1.49	1.49	1.49	1.49	1.49	1.49	-2.6%
Gross Interregional Electricity Imports	14.05	13.47	10.66	11.42	12.51	11.00	9.25	12.24	9.71	9.88	9.93	13.42	11.41	2.4%
Gross Interregional Electricity Exports	60.35	55.71	52.27	51.73	53.68	50.63	46.82	48.52	43.60	40.30	37.04	38.31	36.41	-0.4%
Purchases from Combined Heat and Power 8/	3.37	3.50	4.07	5.43	7.39	8.21	9.28	10.48	11.19	11.20	11.21	11.23	11.24	10.7%
Electric Power Sector Generation for Custome	674.45	673.61	675.58	675.80	677.91	679.12	680.68	681.89	683.35	684.67	685.59	684.33	688.04	0.6%
Total Net Energy for Load	629.79	633.26	636.34	639.55	642.84	646.55	651.03	654.78	659.52	664.14	668.52	671.79	675.67	0.8%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	562.26	566.11	568.02	567.58	567.66	568.09	567.62	568.46	568.31	568.39	568.19	566.27	566.26	0.4%
Petroleum	3.16	3.16	3.40	3.43	3.42	3.42	3.41	3.41	3.51	3.60	3.61	3.68	3.68	-1.5%
Natural Gas	43.01	38.49	38.52	38.95	40.90	41.79	43.83	44.09	45.60	46.85	47.99	48.58	52.48	4.5%
Nuclear	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	0.2%
Pumped Storage/Other 9/	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.4%
Renewable Sources 10/	7.43	7.26	7.05	7.26	7.34	7.24	7.24	7.33	7.34	7.25	7.21	7.21	7.03	0.5%
Total Generation	675.89	675.05	677.02	677.24	679.35	680.56	682.12	683.33	684.78	686.10	687.03	685.77	689.47	0.6%
Sales to Customers	674.45	673.61	675.58	675.80	677.91	679.12	680.68	681.89	683.35	684.67	685.59	684.33	688.04	0.6%
Generation for Own Use	1.43	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	0.1%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.04	--

Table 62. Electric Power Projections for EMM Region  
East Central Area Reliability Coordinaiton Agreement - 01

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	8.05	5.08	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	0.0%
Petroleum	0.18	0.18	0.18	0.24	0.43	0.48	0.53	0.53	0.53	0.58	0.58	0.58	0.58	6.8%
Natural Gas	1.77	1.84	1.92	2.01	2.12	2.21	2.29	2.37	2.45	2.55	2.64	2.74	2.85	5.5%
Other Gaseous Fuels	3.28	3.28	3.28	3.28	3.28	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	-0.4%
Renewable Sources 10/	4.99	8.11	10.92	14.13	17.93	20.62	24.06	27.93	30.22	30.26	30.30	30.34	30.38	12.8%
Other	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	-1.0%
Total	18.72	18.93	20.54	23.90	28.01	30.84	34.43	38.38	40.75	40.93	41.06	41.20	41.36	5.8%
Sales to Utilities	3.37	3.50	4.07	5.43	7.39	8.21	9.28	10.48	11.19	11.20	11.21	11.23	11.24	10.7%
Generation for Own Use	15.35	15.43	16.47	18.47	20.62	22.62	25.15	27.90	29.56	29.73	29.85	29.98	30.12	4.9%
<b>Total Electricity Generation</b>	<b>694.60</b>	<b>693.98</b>	<b>697.55</b>	<b>701.14</b>	<b>707.36</b>	<b>711.39</b>	<b>716.55</b>	<b>721.70</b>	<b>725.53</b>	<b>727.05</b>	<b>728.11</b>	<b>727.00</b>	<b>730.88</b>	<b>0.8%</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)														
Residential	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.3	9.3	9.4	9.4	9.4	0.5%
Commercial	8.4	8.4	8.4	8.4	8.5	8.6	8.6	8.6	8.5	8.5	8.6	8.6	8.7	0.6%
Industrial	5.7	5.7	5.7	5.6	5.7	5.7	5.7	5.7	5.6	5.6	5.7	5.7	5.8	0.6%
Transportation	7.6	7.6	7.6	7.5	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.6	7.6	-0.2%
All Sectors Average	7.7	7.7	7.8	7.7	7.8	7.8	7.8	7.9	7.8	7.8	7.9	7.9	8.0	0.6%
<b>Prices by Service Category</b> (2006 cents per kilowatthour)														
Generation	5.4	5.5	5.5	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.6	5.7	0.7%
Transmission	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0%
Distribution	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.2%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	5.56	5.60	5.62	5.61	5.61	5.62	5.61	5.62	5.62	5.62	5.62	5.60	5.60	0.3%
Natural Gas	0.36	0.32	0.32	0.32	0.34	0.33	0.35	0.35	0.36	0.37	0.37	0.38	0.40	3.2%
Oil	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	-2.0%
Total	5.95	5.95	5.97	5.97	5.98	5.99	5.99	6.00	6.01	6.02	6.03	6.01	6.04	0.4%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.68	1.68	1.68	1.68	1.69	1.70	1.70	1.71	1.71	1.72	1.73	1.73	1.75	0.0%
Natural Gas	5.19	5.24	5.13	5.02	5.17	5.28	5.39	5.55	5.68	5.79	6.00	6.16	6.30	-0.2%
Distillate Fuel Oil	10.23	10.38	10.49	10.60	10.74	10.93	11.16	11.38	11.64	11.84	12.05	12.30	12.47	-0.4%
Residual Fuel Oil	-2.91	-2.15	-1.51	-0.98	-0.22	0.74	1.59	2.61	3.58	2.78	3.77	4.87	5.60	-1.4%
Biomass	1.97	2.02	1.98	1.98	1.98	1.97	1.95	1.97	1.97	1.96	1.97	1.97	1.78	-0.2%
<b>Emissions 12/</b>														
Total Carbon (million tons)	165.57	166.07	166.60	166.57	166.77	166.94	166.91	167.20	167.32	167.49	167.58	166.98	167.26	0.5%
Carbon Dioxide (million tons)	607.10	608.91	610.88	610.77	611.49	612.11	612.00	613.08	613.49	614.13	614.47	612.26	613.28	0.5%
Sulfur Dioxide (million tons)	1.12	1.11	1.08	1.02	1.04	1.02	1.03	1.03	1.05	1.04	1.05	1.03	1.05	-4.2%
Nitrogen Oxide (million tons)	0.32	0.31	0.31	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.28	-4.5%
Mercury (tons)	4.52	4.47	4.06	4.08	3.85	3.63	3.60	3.54	3.18	2.93	2.95	2.83	2.67	-6.2%

Table 62. Electric Power Projections for EMM Region  
East Central Area Reliability Coordination Agreement - 01

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.



Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	15.27	15.27	15.27	15.27	15.27	16.02	16.91	18.37	18.37	18.37	18.37	18.37	18.70
Oil and Natural Gas Steam 2/	28.13	27.51	26.70	26.31	26.31	26.31	26.31	15.52	15.52	15.52	15.52	15.52	15.52
Combined Cycle	24.09	24.71	25.24	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65
Combustion Turbine/Diesel	4.65	4.56	4.50	6.94	7.20	7.23	7.34	7.43	7.78	7.98	8.15	8.49	8.78
Nuclear Power	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.93	4.93	5.07	5.07	5.07	5.23
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	2.39	3.16	4.16	4.90	4.90	4.90	4.90	4.90	4.94	4.96	4.96	5.00	5.00
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.07	0.13	0.18	0.23	0.27	0.31	0.36	0.40	0.44
Total Capacity	79.39	80.06	80.72	83.92	84.27	85.11	86.16	77.02	77.44	77.85	78.07	78.50	79.31
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.53	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	1.05	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.80
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.53	2.68	2.68	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.89	2.34	2.34	2.34	2.34	2.34	2.68
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	2.44	2.71	2.74	2.85	2.94	3.28	3.48	3.65	4.00	4.29
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.05	0.09	0.09
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.07	0.13	0.18	0.23	0.27	0.31	0.36	0.40	0.44
Total Unplanned Additions	0.00	0.00	0.00	2.44	2.78	2.87	3.92	5.51	5.93	6.19	6.41	6.84	7.50
Cumulative Total Additions	0.00	0.00	1.53	5.12	5.47	6.31	7.36	8.94	9.37	9.63	9.85	10.28	10.94

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	0.00	0.00	0.81	1.20	1.20	1.20	1.20	11.99	11.99	11.99	11.99	11.99	11.99
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.87	1.26	1.26	1.26	1.26	12.05	12.05	12.05	12.05	12.05	12.05
<b>End-Use Sectors 8/</b>													
Coal	0.46	0.38	0.38	0.38	0.35	0.35	0.43	0.57	0.45	0.35	0.35	0.45	0.36
Petroleum	0.08	0.07	0.10	0.10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Natural Gas	4.92	4.65	4.68	4.70	4.64	4.67	4.69	4.72	4.75	4.77	4.80	4.83	4.86
Other Gaseous Fuels	0.14	0.12	0.14	0.14	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Renewable Sources 4/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.33	0.67	0.74	0.72	0.89
Other	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Total	5.75	5.37	5.43	5.46	5.49	5.51	5.62	5.78	6.01	6.28	6.38	6.49	6.59
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	111.97	114.97	110.89	113.09	115.10	117.23	118.84	120.66	119.16	120.06	121.22	122.81	123.94
Commercial/Other	90.37	93.61	93.55	95.89	96.03	97.60	99.70	101.70	103.76	106.12	108.37	110.55	112.59
Industrial	82.41	82.83	82.19	79.11	80.67	83.02	84.91	85.73	86.44	86.54	86.76	86.69	86.57
Transportation	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
Total Sales	284.82	291.49	286.70	288.16	291.87	297.92	303.53	308.17	309.45	312.81	316.44	320.14	323.20
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Gross International Exports	0.37	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Gross Interregional Electricity Imports	3.82	4.17	1.46	1.75	3.29	3.78	3.44	1.66	2.51	2.18	1.86	2.16	1.88
Gross Interregional Electricity Exports	1.52	1.90	2.77	2.94	1.53	1.53	1.53	1.51	1.36	1.21	1.05	0.90	0.76
Purchases from Combined Heat and Power 8/	4.57	4.61	5.73	5.76	6.04	6.08	6.31	6.67	7.19	7.80	8.01	8.23	8.44
Electric Power Sector Generation for Custome	285.43	291.50	301.20	302.23	302.85	308.27	313.85	319.67	319.00	321.61	324.89	328.13	331.26
Total Net Energy for Load	292.03	297.92	305.15	306.33	310.18	316.14	321.60	326.02	326.88	329.92	333.24	337.15	340.36
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	115.26	113.22	110.63	109.45	109.50	112.39	119.75	130.23	131.43	131.95	130.52	130.84	133.24
Petroleum	1.41	1.68	0.65	0.63	0.70	0.67	0.73	0.93	0.95	0.96	1.40	1.45	1.50
Natural Gas	131.04	133.81	145.83	146.14	146.11	148.66	146.81	141.63	138.76	138.93	141.99	144.89	144.28
Nuclear	38.23	41.26	38.75	38.67	38.48	38.48	38.48	38.81	38.81	40.01	40.01	40.01	41.22
Pumped Storage/Other 9/	1.43	1.84	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Renewable Sources 10/	5.07	6.42	10.75	12.74	13.46	13.48	13.48	13.48	14.46	15.17	16.38	16.35	16.42
Total Generation	292.44	298.24	306.67	307.69	308.32	313.74	319.31	325.13	324.46	327.08	330.36	333.60	336.73
Sales to Customers	285.43	291.50	301.20	302.23	302.85	308.27	313.85	319.67	319.00	321.61	324.89	328.13	331.26
Generation for Own Use	7.01	6.73	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.03	0.06	0.08	0.10	0.12	0.14	0.16	0.17	0.19

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	2.61	2.76	2.77	2.77	2.49	2.49	3.06	4.10	3.20	2.49	2.49	3.21	2.52
Petroleum	0.16	0.14	0.36	0.36	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Natural Gas	24.82	25.15	25.21	25.37	25.59	25.78	25.98	26.19	26.40	26.61	26.82	27.04	27.26
Other Gaseous Fuels	2.57	2.05	1.93	1.93	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
Renewable Sources 10/	0.10	0.12	0.12	0.12	0.12	0.12	0.12	0.12	2.53	5.06	5.60	5.42	6.66
Other	0.44	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Total	30.70	31.15	31.32	31.48	32.05	32.24	33.01	34.26	35.98	38.00	38.76	39.52	40.29
Sales to Utilities	4.57	4.61	5.73	5.76	6.04	6.08	6.31	6.67	7.19	7.80	8.01	8.23	8.44
Generation for Own Use	26.12	26.54	25.59	25.71	26.01	26.16	26.71	27.58	28.79	30.20	30.74	31.29	31.84
<b>Total Electricity Generation</b>	<b>323.14</b>	<b>329.39</b>	<b>337.99</b>	<b>339.17</b>	<b>340.40</b>	<b>346.04</b>	<b>352.41</b>	<b>359.49</b>	<b>360.56</b>	<b>365.22</b>	<b>369.27</b>	<b>373.29</b>	<b>377.21</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	11.6	13.3	12.0	12.4	12.9	12.6	12.3	12.6	12.6	12.5	12.6	12.8	12.9
Commercial	9.3	10.1	9.2	9.5	9.9	9.3	8.9	9.1	9.0	8.9	9.0	9.2	9.3
Industrial	7.7	8.1	7.8	8.1	8.5	7.9	7.4	7.4	7.3	7.1	7.2	7.3	7.3
Transportation	9.6	8.9	9.5	10.0	10.6	10.4	10.2	10.5	10.4	10.3	10.4	10.6	10.6
All Sectors Average	9.7	10.7	9.9	10.3	10.7	10.2	9.8	10.0	9.9	9.8	9.9	10.0	10.1
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	6.6	7.6	6.7	7.1	7.5	7.0	6.6	6.8	6.7	6.6	6.7	6.9	7.0
Transmission	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
Distribution	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.24	1.23	1.17	1.16	1.16	1.19	1.25	1.35	1.36	1.36	1.35	1.36	1.38
Natural Gas	1.19	1.21	1.27	1.27	1.26	1.26	1.23	1.19	1.17	1.18	1.20	1.22	1.22
Oil	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Total	2.44	2.46	2.45	2.43	2.42	2.45	2.50	2.55	2.54	2.55	2.57	2.59	2.61
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.27	1.36	1.39	1.41	1.44	1.48	1.49	1.50	1.49	1.50	1.51	1.49	1.50
Natural Gas	8.32	6.49	6.73	7.12	7.32	6.86	6.52	6.33	6.14	5.95	5.81	5.77	5.84
Distillate Fuel Oil	12.31	13.01	14.84	17.09	13.47	12.81	12.11	11.41	10.72	10.44	9.87	9.44	9.45
Residual Fuel Oil	7.95	7.85	8.31	10.06	11.00	10.18	9.64	8.23	7.84	7.68	7.22	6.92	6.91
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.89	1.90
<b>Emissions 12/</b>													
Total Carbon (million tons)	56.05	55.21	55.09	54.58	54.47	55.23	56.81	59.03	58.98	59.11	59.36	59.82	60.42
Carbon Dioxide (million tons)	205.50	202.43	202.00	200.11	199.73	202.49	208.31	216.43	216.24	216.74	217.65	219.34	221.54
Sulfur Dioxide (million tons)	0.33	0.26	0.34	0.34	0.35	0.35	0.29	0.29	0.29	0.28	0.16	0.16	0.16
Nitrogen Oxide (million tons)	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Mercury (tons)	3.73	3.38	3.52	3.43	3.55	2.94	2.93	2.89	3.08	2.63	1.24	1.07	1.04

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	20.94	20.97	21.98	21.98	22.21	23.17	24.40	25.22	26.11	26.92	27.66	29.01	30.94	3.0%
Oil and Natural Gas Steam 2/	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	-2.4%
Combined Cycle	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	0.2%
Combustion Turbine/Diesel	8.78	8.78	8.95	9.23	9.74	9.88	10.02	10.09	10.17	10.46	10.65	11.07	11.07	3.8%
Nuclear Power	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	0.3%
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	5.01	5.01	5.08	5.08	5.08	5.25	5.43	5.51	5.64	5.70	5.76	5.98	5.98	2.7%
Distributed Generation 5/	0.49	0.53	0.58	0.65	0.78	0.96	1.07	1.21	1.26	1.31	1.36	1.41	1.46	--
Total Capacity	81.61	81.69	82.98	83.33	84.20	85.65	87.30	88.41	89.56	90.78	91.83	93.85	95.84	0.8%
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.80	1.80	1.80	1.80	1.81	1.81	1.81	1.81	1.81	1.82	1.82	1.82	1.82	--
Distributed Generation 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	--
Total Planned Additions	3.45	3.45	3.45	3.45	3.45	3.46	3.46	3.46	3.46	3.46	3.47	3.47	3.47	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	4.91	4.95	5.96	5.96	6.19	7.15	8.38	9.19	10.09	10.90	11.64	12.98	14.92	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	4.29	4.29	4.46	4.73	5.24	5.39	5.52	5.60	5.67	5.96	6.16	6.57	6.57	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.09	0.09	0.16	0.16	0.16	0.33	0.50	0.58	0.72	0.77	0.83	1.05	1.05	--
Distributed Generation 5/	0.49	0.53	0.58	0.65	0.78	0.96	1.07	1.21	1.26	1.31	1.36	1.41	1.46	--
Total Unplanned Additions	9.79	9.87	11.16	11.50	12.38	13.82	15.47	16.58	17.73	18.94	19.99	22.01	24.00	--
Cumulative Total Additions	13.23	13.31	14.61	14.95	15.83	17.27	18.93	20.04	21.19	22.41	23.45	25.48	27.47	--

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	11.99	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	12.05	--
<b>End-Use Sectors 8/</b>														
Coal	0.35	0.35	0.35	1.38	1.38	0.86	0.35	0.35	0.68	0.66	0.61	0.58	0.68	2.5%
Petroleum	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	3.6%
Natural Gas	4.89	4.92	4.95	4.98	5.01	5.04	5.07	5.09	5.12	5.15	5.18	5.21	5.24	0.5%
Other Gaseous Fuels	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	1.7%
Renewable Sources 4/	0.94	0.99	1.04	0.01	0.01	0.54	1.05	1.05	0.73	0.75	0.81	0.84	0.76	22.4%
Other	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.0%
Total	6.68	6.76	6.83	6.86	6.89	6.93	6.96	6.99	7.02	7.05	7.09	7.12	7.16	1.2%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	125.57	126.95	128.19	129.18	130.66	132.26	134.22	135.70	137.51	139.39	141.37	142.84	144.75	1.0%
Commercial/Other	114.99	117.17	119.45	121.74	123.95	126.28	128.66	131.07	133.39	135.82	138.10	140.58	143.21	1.8%
Industrial	86.62	86.32	86.13	85.95	86.06	85.95	86.04	86.22	86.55	86.76	86.88	86.91	87.24	0.2%
Transportation	0.09	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	1.9%
Total Sales	327.27	330.54	333.86	336.97	340.77	344.59	349.03	353.10	357.56	362.08	366.46	370.44	375.31	1.1%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.1%
Gross International Exports	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.0%
Gross Interregional Electricity Imports	1.50	1.85	1.34	2.15	3.76	4.90	4.99	4.72	4.58	4.58	4.34	4.01	3.54	-0.7%
Gross Interregional Electricity Exports	0.61	0.47	0.32	0.17	0.02	0.01	0.00	0.01	0.02	0.02	0.02	0.02	0.02	-17.0%
Purchases from Combined Heat and Power 8/	8.61	8.77	8.92	8.96	9.01	9.04	9.08	9.12	9.15	9.19	9.22	9.26	9.30	3.0%
Electric Power Sector Generation for Custome	335.62	338.41	342.13	344.38	346.59	349.42	353.96	358.49	363.29	368.01	372.83	377.32	382.88	1.1%
Total Net Energy for Load	344.65	348.09	351.59	354.86	358.86	362.89	367.56	371.84	376.54	381.30	385.90	390.10	395.23	1.2%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	148.56	149.36	156.98	156.83	158.36	165.89	175.44	181.48	188.39	194.34	199.72	210.39	224.56	2.9%
Petroleum	1.66	1.67	1.75	1.75	1.77	1.84	1.93	1.99	2.06	2.12	2.17	2.27	2.27	1.3%
Natural Gas	132.48	134.11	129.73	131.99	132.46	127.49	122.18	120.40	118.00	116.49	115.65	109.17	100.34	-1.2%
Nuclear	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	0.0%
Pumped Storage/Other 9/	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	-13.4%
Renewable Sources 10/	17.10	17.45	17.85	18.00	18.18	18.38	18.60	18.80	19.02	19.25	19.46	19.66	19.88	4.8%
Total Generation	341.09	343.88	347.59	349.85	352.06	354.88	359.43	363.95	368.76	373.48	378.29	382.78	388.34	1.1%
Sales to Customers	335.62	338.41	342.13	344.38	346.59	349.42	353.96	358.49	363.29	368.01	372.83	377.32	382.88	1.1%
Generation for Own Use	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	-0.9%
Distributed Generation 5/	0.22	0.23	0.26	0.28	0.34	0.42	0.47	0.53	0.55	0.57	0.59	0.62	0.64	--

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	2.49	2.49	2.49	10.14	10.14	6.23	2.49	2.49	4.91	4.77	4.40	4.21	4.90	2.4%
Petroleum	0.71	0.72	0.74	0.78	0.78	0.78	0.78	0.78	0.74	0.78	0.74	0.74	0.74	7.1%
Natural Gas	27.48	27.72	27.96	28.19	28.42	28.63	28.84	29.04	29.24	29.46	29.66	29.88	30.10	0.8%
Other Gaseous Fuels	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	0.3%
Renewable Sources 10/	7.07	7.45	7.78	0.13	0.13	4.05	7.80	7.81	5.39	5.54	5.93	6.13	5.45	17.3%
Other	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.0%
Total	40.88	41.51	42.11	42.39	42.62	42.84	43.05	43.26	43.43	43.69	43.87	44.10	44.33	1.5%
Sales to Utilities	8.61	8.77	8.92	8.96	9.01	9.04	9.08	9.12	9.15	9.19	9.22	9.26	9.30	3.0%
Generation for Own Use	32.28	32.74	33.19	33.43	33.61	33.79	33.97	34.15	34.28	34.51	34.65	34.84	35.03	1.2%
<b>Total Electricity Generation</b>	<b>382.19</b>	<b>385.63</b>	<b>389.95</b>	<b>392.52</b>	<b>395.02</b>	<b>398.14</b>	<b>402.95</b>	<b>407.74</b>	<b>412.74</b>	<b>417.75</b>	<b>422.76</b>	<b>427.50</b>	<b>433.31</b>	<b>1.1%</b>
<b>End-Use Prices</b>														
<b>(2006 cents per kilowatthour)</b>														
Residential	12.4	12.7	12.6	12.7	12.8	12.7	12.7	12.7	12.8	12.8	13.1	12.9	12.8	-0.2%
Commercial	8.8	9.2	9.0	9.1	9.3	9.2	9.2	9.2	9.3	9.3	9.6	9.4	9.3	-0.3%
Industrial	7.0	7.3	7.2	7.2	7.4	7.4	7.4	7.5	7.5	7.6	7.8	7.8	7.7	-0.2%
Transportation	10.3	10.6	10.5	10.6	10.7	10.4	10.4	10.5	10.6	10.7	11.0	10.9	10.8	0.8%
All Sectors Average	9.7	10.1	9.9	10.0	10.1	10.1	10.1	10.1	10.2	10.2	10.5	10.4	10.3	-0.2%
<b>Prices by Service Category</b>														
<b>(2006 cents per kilowatthour)</b>														
Generation	6.6	6.9	6.8	6.9	7.0	7.0	7.0	7.1	7.2	7.2	7.5	7.4	7.3	-0.2%
Transmission	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8%
Distribution	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	-0.5%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.52	1.53	1.59	1.59	1.61	1.67	1.76	1.81	1.87	1.92	1.97	2.06	2.17	2.4%
Natural Gas	1.13	1.14	1.11	1.12	1.13	1.09	1.05	1.04	1.02	1.01	1.00	0.95	0.89	-1.3%
Oil	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.6%
Total	2.66	2.68	2.72	2.73	2.75	2.78	2.83	2.87	2.91	2.95	2.99	3.04	3.08	0.9%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.53	1.54	1.56	1.56	1.57	1.58	1.60	1.61	1.63	1.64	1.66	1.67	1.69	0.9%
Natural Gas	5.91	5.99	5.97	5.91	6.04	6.13	6.25	6.36	6.42	6.49	6.74	6.86	7.00	0.3%
Distillate Fuel Oil	9.60	9.74	9.85	9.95	10.06	10.25	10.49	10.70	10.94	11.12	11.33	11.58	11.81	-0.4%
Residual Fuel Oil	7.04	7.32	7.54	7.67	7.75	7.95	8.14	8.31	8.49	8.52	8.70	8.78	8.97	0.6%
Biomass	1.92	2.02	1.94	1.94	1.95	1.93	1.88	1.90	1.88	1.89	1.89	1.82	1.72	-0.3%
<b>Emissions 12/</b>														
Total Carbon (million tons)	63.08	63.49	64.97	65.20	65.66	67.01	68.84	70.20	71.71	73.05	74.33	76.33	78.30	1.5%
Carbon Dioxide (million tons)	231.28	232.81	238.22	239.07	240.75	245.70	252.43	257.39	262.92	267.84	272.55	279.88	287.10	1.5%
Sulfur Dioxide (million tons)	0.13	0.13	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.13	-3.0%
Nitrogen Oxide (million tons)	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.6%
Mercury (tons)	0.80	0.81	0.79	0.83	0.80	0.73	0.76	0.78	0.79	0.79	0.80	0.78	0.80	-5.8%

Table 63. Electric Power Projections for EMM Region  
Electric Reliability Council of Texas - 02

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	21.59	21.59	21.59	21.59	21.55	21.55	21.55	21.55	21.55	21.55	21.55	21.55	21.87
Oil and Natural Gas Steam 2/	7.63	7.63	7.63	7.63	7.63	7.63	7.63	6.75	6.75	6.75	6.75	6.75	6.75
Combined Cycle	12.08	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27
Combustion Turbine/Diesel	10.58	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54
Nuclear Power	13.27	13.27	13.29	13.32	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48
Pumped Storage/Other 3/	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
Fuel Cells	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
Renewable Sources 4/	2.04	2.12	2.23	2.34	2.34	3.23	4.33	4.33	4.33	4.59	4.88	5.29	5.45
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.10	0.14
<b>Total Capacity</b>	<b>68.67</b>	<b>69.89</b>	<b>70.02</b>	<b>70.16</b>	<b>70.27</b>	<b>71.16</b>	<b>72.26</b>	<b>71.38</b>	<b>71.38</b>	<b>71.66</b>	<b>71.98</b>	<b>72.43</b>	<b>72.95</b>
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.15	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Distributed Generation 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
<b>Total Planned Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.89	1.99	1.99	1.99	2.25	2.54	2.95	3.11
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.10	0.14
<b>Total Unplanned Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.89</b>	<b>1.99</b>	<b>1.99</b>	<b>1.99</b>	<b>2.27</b>	<b>2.59</b>	<b>3.04</b>	<b>3.57</b>
<b>Cumulative Total Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.22</b>	<b>0.22</b>	<b>1.11</b>	<b>2.21</b>	<b>2.21</b>	<b>2.21</b>	<b>2.49</b>	<b>2.81</b>	<b>3.27</b>	<b>3.79</b>



Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.88	0.88	0.88
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.93	0.93	0.93	0.93	0.93	0.93
<b>End-Use Sectors 8/</b>													
Coal	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Petroleum	0.10	0.12	0.12	0.12	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Natural Gas	0.31	0.31	0.34	0.36	0.62	0.65	0.67	0.70	0.72	0.75	0.79	0.83	0.88
Other Gaseous Fuels	0.40	0.30	0.11	0.11	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Renewable Sources 4/	0.13	0.14	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.18	0.19	0.20
Other	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
Total	1.20	1.11	0.95	0.99	1.45	1.49	1.52	1.54	1.57	1.60	1.64	1.69	1.74
<b>Electricity Demand</b> (billion kilowatthours)													
Residential	99.70	95.38	103.42	104.11	105.49	106.70	107.53	108.52	106.05	106.07	106.43	107.29	107.77
Commercial/Other	112.70	112.46	121.58	123.57	122.79	124.15	126.17	128.04	130.12	132.50	134.76	136.99	139.02
Industrial	57.96	55.34	54.74	55.12	55.00	56.41	57.44	57.83	57.99	57.81	57.72	57.64	57.34
Transportation	1.78	1.78	1.88	1.91	1.95	2.00	2.04	2.07	2.11	2.14	2.17	2.20	2.23
Total Sales	272.15	264.96	281.62	284.70	285.23	289.26	293.18	296.47	296.26	298.52	301.07	304.12	306.35
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	41.12	25.00	31.94	32.39	32.10	34.91	32.89	34.77	35.52	38.14	36.84	33.31	30.76
Gross Interregional Electricity Exports	19.13	10.42	11.98	13.49	14.05	5.29	5.45	6.34	6.25	9.46	10.20	9.86	11.78
Purchases from Combined Heat and Power 8/	1.22	1.39	1.29	1.33	1.02	1.06	1.10	1.15	1.18	1.22	1.27	1.31	1.34
Electric Power Sector Generation for Custome	280.72	277.94	280.47	284.38	286.03	278.21	284.00	285.94	284.31	286.74	290.89	297.28	304.07
Total Net Energy for Load	303.92	293.92	301.73	304.62	305.09	308.88	312.54	315.52	314.77	316.63	318.80	322.03	324.39
<b>Generation by Fuel Type</b> (billion kilowatthours)													
<b>Electric Power Sector</b>													
Coal	130.10	129.50	132.60	132.70	133.87	125.56	128.71	126.28	126.10	126.32	128.96	129.71	132.28
Petroleum	10.55	2.29	3.26	3.23	3.28	3.41	3.42	3.47	3.49	3.51	3.68	3.73	3.76
Natural Gas	27.22	31.20	29.49	33.46	33.95	20.82	22.08	22.40	19.17	18.18	18.92	20.71	22.56
Nuclear	108.41	109.56	108.28	108.02	107.71	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42
Pumped Storage/Other 9/	0.99	0.96	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Renewable Sources 10/	6.43	7.42	8.51	8.63	8.89	21.66	23.05	27.04	28.81	31.99	32.58	36.39	38.75
Total Generation	283.69	280.92	282.98	286.88	288.53	280.71	286.51	288.44	286.82	289.25	293.40	299.79	306.59
Sales to Customers	280.72	277.94	280.47	284.38	286.03	278.21	284.00	285.94	284.31	286.74	290.89	297.28	304.07
Generation for Own Use	2.97	2.98	2.50	2.50	2.50	2.51	2.51	2.50	2.51	2.51	2.51	2.52	2.52
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.06

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	1.20	1.16	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Petroleum	0.58	0.40	0.40	0.40	0.44	0.44	0.44	0.45	0.44	0.44	0.45	0.45	0.44
Natural Gas	1.63	1.60	1.79	1.98	3.43	3.61	3.78	4.02	4.21	4.41	4.74	5.02	5.31
Other Gaseous Fuels	0.68	1.01	1.03	1.03	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49	0.49
Renewable Sources 10/	0.97	0.99	1.00	1.01	1.02	1.06	1.07	1.08	1.08	1.09	1.10	1.11	1.13
Other	0.12	0.12	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	5.17	5.28	5.35	5.55	6.49	6.71	6.90	7.16	7.34	7.55	7.90	8.18	8.49
Sales to Utilities	1.22	1.39	1.29	1.33	1.02	1.06	1.10	1.15	1.18	1.22	1.27	1.31	1.34
Generation for Own Use	3.95	3.89	4.06	4.22	5.48	5.64	5.80	6.01	6.16	6.33	6.63	6.88	7.14
<b>Total Electricity Generation</b>	<b>288.85</b>	<b>286.20</b>	<b>288.33</b>	<b>292.43</b>	<b>295.02</b>	<b>287.42</b>	<b>293.41</b>	<b>295.60</b>	<b>294.16</b>	<b>296.80</b>	<b>301.33</b>	<b>308.02</b>	<b>315.14</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	10.7	11.4	11.6	11.9	12.3	11.8	11.6	11.7	11.5	11.5	11.5	11.7	11.7
Commercial	10.2	11.0	10.4	10.7	10.9	10.3	9.9	10.0	9.8	9.6	9.7	9.9	9.9
Industrial	8.0	8.5	7.9	8.2	8.4	7.8	7.5	7.5	7.2	7.0	7.0	7.1	7.2
Transportation	10.6	10.0	10.1	10.7	11.0	10.5	10.1	10.1	9.9	9.7	9.8	9.8	9.9
All Sectors Average	9.8	10.6	10.4	10.7	10.9	10.4	10.0	10.1	9.9	9.8	9.9	10.0	10.0
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	6.9	7.7	7.4	7.8	7.9	7.4	7.0	7.0	6.8	6.7	6.8	6.9	6.9
Transmission	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Distribution	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.34	1.33	1.31	1.31	1.32	1.25	1.28	1.26	1.26	1.26	1.29	1.29	1.32
Natural Gas	0.24	0.27	0.27	0.30	0.30	0.20	0.21	0.21	0.19	0.18	0.18	0.20	0.21
Oil	0.12	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Total	1.70	1.63	1.62	1.65	1.67	1.49	1.53	1.51	1.48	1.48	1.51	1.54	1.57
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	2.09	2.06	2.06	2.07	2.11	2.13	2.14	2.10	2.09	2.06	2.05	2.04	2.03
Natural Gas	9.62	7.62	7.13	7.54	7.77	7.33	7.03	6.80	6.51	6.30	6.17	6.12	6.18
Distillate Fuel Oil	12.10	12.79	14.69	16.86	14.95	14.29	13.59	12.89	12.19	11.91	11.36	10.93	10.94
Residual Fuel Oil	7.41	7.78	8.22	9.96	9.96	9.37	8.92	8.40	7.95	7.63	7.16	6.74	6.75
Biomass	1.87	1.87	1.87	1.87	1.87	1.88	1.89	1.92	1.94	1.96	2.23	2.26	2.28
<b>Emissions 12/</b>													
Total Carbon (million tons)	41.43	40.78	42.48	42.97	43.49	39.68	40.68	40.11	39.72	39.70	40.58	41.00	41.86
Carbon Dioxide (million tons)	151.92	149.53	155.78	157.57	159.46	145.50	149.17	147.08	145.63	145.56	148.78	150.35	153.50
Sulfur Dioxide (million tons)	1.16	1.01	1.08	1.00	0.72	0.37	0.34	0.29	0.28	0.27	0.28	0.28	0.28
Nitrogen Oxide (million tons)	0.21	0.19	0.22	0.21	0.14	0.13	0.14	0.14	0.14	0.14	0.10	0.10	0.11
Mercury (tons)	5.84	5.52	5.89	5.52	5.09	1.92	1.88	1.59	1.62	1.52	1.25	1.20	1.20

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.95	23.58	24.25	25.60	25.99	0.8%
Oil and Natural Gas Steam 2/	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	-0.5%
Combined Cycle	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	0.0%
Combustion Turbine/Diesel	10.54	10.68	11.18	11.85	12.51	13.25	13.97	14.62	14.62	14.62	14.62	14.62	14.62	1.4%
Nuclear Power	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	12.86	12.86	-0.1%
Pumped Storage/Other 3/	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	0.0%
Fuel Cells	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	--
Renewable Sources 4/	5.74	6.31	6.52	6.59	6.67	6.68	6.69	6.74	6.85	6.94	6.98	6.98	7.25	5.3%
Distributed Generation 5/	0.26	0.38	0.50	0.63	0.75	0.88	1.01	1.13	1.26	1.39	1.51	1.63	1.74	--
<b>Total Capacity</b>	<b>73.80</b>	<b>74.64</b>	<b>75.48</b>	<b>76.35</b>	<b>77.21</b>	<b>78.08</b>	<b>78.94</b>	<b>79.77</b>	<b>80.65</b>	<b>81.49</b>	<b>82.32</b>	<b>83.17</b>	<b>83.94</b>	<b>0.8%</b>
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	--
Distributed Generation 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	--
<b>Total Planned Additions</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>--</b>
<b>Cumulative Unplanned Additions 6/</b>														
Coal	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	1.40	2.03	2.71	4.05	4.44	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.00	0.14	0.64	1.32	1.97	2.71	3.43	4.09	4.09	4.09	4.09	4.09	4.09	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	3.40	3.97	4.18	4.25	4.33	4.34	4.35	4.41	4.51	4.60	4.64	4.64	4.91	--
Distributed Generation 5/	0.26	0.38	0.50	0.63	0.75	0.88	1.01	1.13	1.26	1.39	1.51	1.63	1.74	--
<b>Total Unplanned Additions</b>	<b>4.42</b>	<b>5.25</b>	<b>6.09</b>	<b>6.96</b>	<b>7.82</b>	<b>8.69</b>	<b>9.55</b>	<b>10.39</b>	<b>11.26</b>	<b>12.10</b>	<b>12.94</b>	<b>14.40</b>	<b>15.17</b>	<b>--</b>
<b>Cumulative Total Additions</b>	<b>4.64</b>	<b>5.47</b>	<b>6.31</b>	<b>7.18</b>	<b>8.04</b>	<b>8.91</b>	<b>9.77</b>	<b>10.61</b>	<b>11.48</b>	<b>12.32</b>	<b>13.16</b>	<b>14.62</b>	<b>15.40</b>	<b>--</b>

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.04	--
Oil and Natural Gas Steam 3/	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.62	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	1.55	1.55	--
<b>End-Use Sectors 8/</b>														
Coal	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.0%
Petroleum	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	3.5%
Natural Gas	0.92	0.97	1.02	1.07	1.13	1.19	1.26	1.32	1.40	1.47	1.55	1.64	1.73	7.5%
Other Gaseous Fuels	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-2.7%
Renewable Sources 4/	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.36	0.39	0.43	0.47	0.52	0.57	5.9%
Other	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%
Total	1.80	1.87	1.94	2.01	2.09	2.17	2.26	2.35	2.46	2.58	2.70	2.83	2.97	4.2%
<b>Electricity Demand</b> (billion kilowatthours)														
Residential	108.53	109.32	109.94	110.40	111.37	112.39	113.74	114.65	115.93	117.22	118.74	119.69	120.91	1.0%
Commercial/Other	141.00	143.05	145.09	147.31	149.39	151.38	153.32	155.23	157.11	159.01	160.84	162.73	164.49	1.6%
Industrial	56.91	56.39	55.94	55.59	55.03	54.47	53.97	53.51	53.05	52.74	52.19	51.66	51.27	-0.3%
Transportation	2.25	2.28	2.31	2.33	2.36	2.39	2.42	2.44	2.47	2.49	2.52	2.55	2.57	1.5%
Total Sales	308.70	311.04	313.28	315.62	318.14	320.64	323.45	325.84	328.56	331.48	334.30	336.63	339.24	1.0%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	30.01	27.63	29.47	30.51	32.95	35.81	38.07	38.96	38.11	34.83	33.20	27.24	26.00	0.2%
Gross Interregional Electricity Exports	12.97	13.75	14.05	13.55	13.15	13.57	13.43	12.69	14.05	13.25	13.91	14.05	14.05	1.3%
Purchases from Combined Heat and Power 8/	1.38	1.44	1.51	1.56	1.61	1.65	1.70	1.74	1.79	1.84	1.90	1.95	2.01	1.5%
Electric Power Sector Generation for Custome	308.47	314.03	314.80	315.68	315.47	315.63	316.16	317.02	322.05	327.57	332.80	341.31	345.25	0.9%
Total Net Energy for Load	326.88	329.36	331.73	334.21	336.88	339.52	342.50	345.03	347.91	351.00	353.99	356.45	359.22	0.8%
<b>Generation by Fuel Type</b> (billion kilowatthours)														
<b>Electric Power Sector</b>														
Coal	135.74	139.30	140.08	140.18	139.05	138.64	138.78	139.07	143.73	149.02	153.81	163.36	167.56	1.1%
Petroleum	3.76	3.79	3.79	3.79	3.78	3.78	3.76	3.76	3.76	3.75	3.77	3.76	3.76	2.1%
Natural Gas	20.08	19.77	17.60	18.13	18.23	18.32	18.41	18.54	18.62	18.68	18.73	19.04	21.50	-1.5%
Nuclear	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	106.75	103.43	-0.2%
Pumped Storage/Other 9/	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	-0.6%
Renewable Sources 10/	42.16	44.44	46.62	46.86	47.69	48.17	48.49	48.93	49.22	49.40	49.76	50.10	50.69	8.3%
Total Generation	310.99	316.56	317.33	318.21	318.00	318.16	318.69	319.55	324.58	330.10	335.33	343.84	347.77	0.9%
Sales to Customers	308.47	314.03	314.80	315.68	315.47	315.63	316.16	317.02	322.05	327.57	332.80	341.31	345.25	0.9%
Generation for Own Use	2.52	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.52	-0.7%
Distributed Generation 5/	0.11	0.16	0.22	0.28	0.33	0.39	0.44	0.50	0.55	0.61	0.66	0.71	0.76	--

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	-0.2%
Petroleum	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.5%
Natural Gas	5.63	5.97	6.35	6.75	7.19	7.64	8.14	8.64	9.18	9.73	10.32	10.94	11.60	8.6%
Other Gaseous Fuels	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.50	0.50	0.50	0.50	-2.9%
Renewable Sources 10/	1.15	1.20	1.27	1.31	1.35	1.38	1.42	1.46	1.52	1.58	1.65	1.71	1.79	2.5%
Other	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	-10.7%
Total	8.83	9.22	9.65	10.10	10.58	11.08	11.62	12.17	12.76	13.38	14.03	14.72	15.47	4.6%
Sales to Utilities	1.38	1.44	1.51	1.56	1.61	1.65	1.70	1.74	1.79	1.84	1.90	1.95	2.01	1.5%
Generation for Own Use	7.45	7.78	8.15	8.55	8.98	9.43	9.93	10.42	10.97	11.53	12.14	12.77	13.45	5.3%
<b>Total Electricity Generation</b>	<b>319.93</b>	<b>325.94</b>	<b>327.20</b>	<b>328.59</b>	<b>328.92</b>	<b>329.63</b>	<b>330.75</b>	<b>332.22</b>	<b>337.89</b>	<b>344.09</b>	<b>350.03</b>	<b>359.27</b>	<b>364.00</b>	<b>1.0%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	11.8	11.7	11.6	11.4	11.5	11.6	11.6	11.6	11.6	11.6	11.6	11.5	11.7	0.1%
Commercial	10.0	9.9	9.8	9.6	9.7	9.8	9.8	9.8	9.8	9.9	10.0	9.8	10.1	-0.4%
Industrial	7.2	7.1	7.0	6.8	6.8	6.9	7.0	7.0	6.9	7.0	7.0	6.9	7.0	-0.8%
Transportation	9.9	9.8	9.6	9.5	9.5	9.5	9.6	9.6	9.5	9.6	9.6	9.5	9.7	-0.1%
All Sectors Average	10.1	10.0	9.9	9.8	9.8	9.9	9.9	10.0	10.0	10.0	10.1	10.0	10.2	-0.2%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	7.0	6.9	6.8	6.6	6.6	6.8	6.8	6.8	6.8	6.9	6.9	6.8	7.0	-0.4%
Transmission	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9%
Distribution	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	0.3%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.34	1.38	1.39	1.39	1.38	1.37	1.37	1.38	1.41	1.45	1.49	1.56	1.59	0.8%
Natural Gas	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.21	-1.2%
Oil	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	2.0%
Total	1.58	1.62	1.61	1.61	1.60	1.60	1.60	1.61	1.64	1.68	1.72	1.79	1.84	0.5%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	2.02	2.01	2.02	2.03	2.02	2.02	2.02	2.01	2.01	2.01	2.01	2.01	2.03	-0.1%
Natural Gas	6.23	6.28	6.22	6.13	6.24	6.31	6.42	6.53	6.61	6.67	6.89	7.02	7.15	-0.3%
Distillate Fuel Oil	11.08	11.22	11.33	11.44	11.55	11.74	11.97	12.19	12.43	12.61	12.83	13.08	13.31	0.2%
Residual Fuel Oil	6.87	7.00	7.10	7.21	7.30	7.45	7.62	7.77	7.91	7.97	8.15	8.27	8.43	0.3%
Biomass	2.30	2.32	2.34	2.34	2.35	2.35	2.35	2.57	2.58	2.58	2.59	2.59	2.60	1.4%
<b>Emissions 12/</b>														
Total Carbon (million tons)	42.42	43.39	43.37	43.48	43.14	43.04	43.10	43.22	44.19	45.41	46.37	48.41	49.69	0.8%
Carbon Dioxide (million tons)	155.54	159.08	159.02	159.43	158.19	157.82	158.05	158.49	162.02	166.49	170.04	177.50	182.20	0.8%
Sulfur Dioxide (million tons)	0.26	0.27	0.26	0.25	0.24	0.24	0.24	0.25	0.25	0.24	0.25	0.24	0.23	-6.0%
Nitrogen Oxide (million tons)	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	-2.3%
Mercury (tons)	1.20	1.19	1.18	1.19	1.17	1.16	1.16	1.16	1.14	1.13	1.14	1.14	1.12	-6.4%

Table 64. Electric Power Projections for EMM Region  
Mid-Atlantic Area Council - -3

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

- - = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	28.73	28.73	28.73	29.19	29.81	30.35	31.10	31.85	31.84	31.80	31.80	31.79	31.77
Oil and Natural Gas Steam 2/	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.05	0.00	0.00	0.00	0.00	0.00
Combined Cycle	5.85	6.02	6.02	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Combustion Turbine/Diesel	16.89	16.89	16.90	16.90	17.05	17.20	17.20	14.69	14.69	14.69	14.69	14.69	14.69
Nuclear Power	14.56	14.56	14.56	14.56	14.57	14.57	14.60	14.62	14.62	14.62	14.62	14.62	14.62
Pumped Storage/Other 3/	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Fuel Cells	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
Renewable Sources 4/	1.02	1.13	1.86	2.59	2.59	3.98	4.71	5.23	5.73	6.24	6.84	7.21	7.75
Distributed Generation 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
Total Capacity	68.30	68.59	69.32	71.08	71.87	73.95	75.46	73.47	73.91	74.38	74.98	75.34	75.87
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.06	0.58	1.19	1.81	2.56	3.31	3.31	3.31	3.31	3.31	3.31
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Combustion Turbine/Diesel	0.00	0.00	0.01	0.01	0.16	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.77	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Distributed Generation 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
Total Planned Additions	0.00	0.00	0.80	2.61	3.38	4.15	4.90	5.65	5.65	5.65	5.65	5.65	5.65
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	1.40	2.12	2.64	3.14	3.66	4.26	4.62	5.17
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	1.40	2.12	2.64	3.14	3.66	4.26	4.62	5.17
Cumulative Total Additions	0.00	0.00	0.80	2.61	3.38	5.55	7.02	8.29	8.79	9.30	9.90	10.27	10.81

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.06	0.12	0.12	0.19	0.19	0.19	0.20	0.24	0.24	0.25	0.27
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.81	0.81	0.81	0.81	0.81
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52	2.52	2.52	2.52	2.52	2.52
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.06	0.12	0.12	0.20	0.20	3.47	3.53	3.57	3.57	3.58	3.60
<b>End-Use Sectors 8/</b>													
Coal	0.74	0.73	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Petroleum	0.16	0.17	0.17	0.17	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Natural Gas	0.25	0.23	0.24	0.24	0.33	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
Other Gaseous Fuels	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
Renewable Sources 4/	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.22	0.24	0.26
Other	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
Total	1.38	1.37	1.38	1.39	1.49	1.50	1.52	1.53	1.54	1.55	1.56	1.59	1.61
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	86.67	83.94	85.93	86.21	86.63	87.32	87.57	88.09	85.55	85.26	85.24	85.63	85.68
Commercial/Other	91.66	92.03	93.16	93.32	94.82	95.62	96.90	98.31	100.02	101.95	103.80	105.59	107.20
Industrial	86.16	85.78	85.13	85.69	85.40	87.28	88.75	89.22	89.06	89.10	89.52	89.86	89.96
Transportation	0.25	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Total Sales	264.74	262.01	264.48	265.50	267.13	270.50	273.49	275.89	274.89	276.58	278.83	281.34	283.10
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	8.50	8.37	6.61	4.49	3.88	3.94	3.99	4.05	3.70	3.29	2.88	2.47	2.06
Gross Interregional Electricity Exports	58.68	43.55	43.26	51.96	60.41	65.07	70.31	76.26	77.44	78.76	78.76	77.76	73.90
Purchases from Combined Heat and Power 8/	0.77	0.74	0.74	0.75	0.79	0.81	0.83	0.85	0.87	0.88	0.90	1.04	1.19
Electric Power Sector Generation for Custome	306.84	306.94	318.16	329.70	340.37	348.08	355.97	363.93	363.93	366.97	369.27	371.20	369.45
Total Net Energy for Load	257.42	272.51	282.25	282.98	284.63	287.77	290.49	292.57	291.06	292.38	294.29	296.94	298.80
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	176.35	173.71	177.08	177.91	182.92	188.73	194.99	201.88	205.35	206.88	207.48	206.60	206.10
Petroleum	0.94	0.77	1.49	1.49	1.34	1.35	1.39	1.35	1.28	1.05	1.04	1.06	1.03
Natural Gas	15.33	12.86	17.92	27.53	32.98	30.02	28.47	27.49	21.63	21.42	20.90	20.47	16.87
Nuclear	112.50	118.21	117.39	116.99	116.26	116.32	116.78	117.06	117.06	117.06	117.06	117.06	117.06
Pumped Storage/Other 9/	0.19	0.47	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Renewable Sources 10/	3.90	3.26	6.01	7.50	8.60	13.38	16.08	17.84	20.31	22.27	24.49	27.72	30.11
Total Generation	309.21	309.28	320.15	331.69	342.36	350.08	357.97	365.90	365.91	368.94	371.25	373.18	371.44
Sales to Customers	306.84	306.94	318.16	329.70	340.37	348.08	355.97	363.93	363.93	366.97	369.27	371.20	369.45
Generation for Own Use	2.37	2.34	2.00	2.00	2.00	2.00	2.00	1.97	1.97	1.98	1.98	1.98	1.99
Distributed Generation 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



Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	3.81	3.92	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96
Petroleum	0.26	0.27	0.27	0.27	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Natural Gas	1.33	1.22	1.25	1.30	1.87	1.92	1.98	2.04	2.11	2.17	2.24	2.32	2.41
Other Gaseous Fuels	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Renewable Sources 10/	1.34	1.30	1.30	1.31	1.31	1.35	1.38	1.40	1.41	1.42	1.43	1.56	1.71
Other	0.07	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Total	6.91	6.87	6.94	6.99	7.61	7.70	7.78	7.87	7.94	8.01	8.10	8.31	8.54
Sales to Utilities	0.77	0.74	0.74	0.75	0.79	0.81	0.83	0.85	0.87	0.88	0.90	1.04	1.19
Generation for Own Use	6.14	6.13	6.20	6.23	6.81	6.89	6.95	7.01	7.07	7.13	7.20	7.28	7.36
<b>Total Electricity Generation</b>	<b>316.12</b>	<b>316.15</b>	<b>327.09</b>	<b>338.68</b>	<b>349.97</b>	<b>357.78</b>	<b>365.76</b>	<b>373.76</b>	<b>373.84</b>	<b>376.95</b>	<b>379.35</b>	<b>381.50</b>	<b>379.98</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	8.8	8.9	9.4	9.6	10.0	10.0	9.9	9.8	9.8	9.7	9.7	9.7	9.8
Commercial	7.6	7.7	8.2	8.3	8.6	8.5	8.3	8.2	7.9	7.8	7.7	7.7	7.8
Industrial	4.9	5.0	5.6	5.8	6.1	5.9	5.6	5.5	5.3	5.1	5.1	5.1	5.1
Transportation	7.2	7.3	7.4	7.8	8.2	8.1	8.0	7.9	7.7	7.6	7.5	7.6	7.6
All Sectors Average	7.1	7.1	7.7	7.9	8.2	8.1	7.9	7.8	7.6	7.5	7.5	7.5	7.5
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	4.5	4.5	5.1	5.3	5.5	5.4	5.2	5.0	4.8	4.7	4.6	4.6	4.7
Transmission	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Distribution	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.91	1.89	1.89	1.90	1.95	2.01	2.07	2.13	2.16	2.18	2.19	2.17	2.17
Natural Gas	0.15	0.12	0.16	0.23	0.27	0.24	0.23	0.22	0.18	0.18	0.17	0.17	0.14
Oil	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Total	2.07	2.02	2.06	2.14	2.24	2.27	2.31	2.37	2.36	2.37	2.37	2.36	2.32
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.40	1.42	1.45	1.49	1.52	1.56	1.55	1.53	1.51	1.50	1.50	1.49	1.49
Natural Gas	7.18	6.52	6.43	6.54	6.61	6.22	5.89	5.67	5.44	5.25	5.12	5.07	5.15
Distillate Fuel Oil	13.22	13.96	14.91	17.62	14.05	13.39	12.68	11.86	11.16	10.88	10.27	9.84	9.85
Residual Fuel Oil	17.81	26.45	29.50	40.00	35.55	32.40	29.90	27.29	24.60	21.91	19.27	16.62	16.75
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
<b>Emissions 12/</b>													
Total Carbon (million tons)	60.08	57.16	57.87	59.26	61.50	62.77	64.24	65.96	66.17	66.47	66.66	66.28	65.65
Carbon Dioxide (million tons)	220.30	209.59	212.19	217.30	225.50	230.17	235.55	241.86	242.62	243.72	244.43	243.04	240.71
Sulfur Dioxide (million tons)	1.00	0.92	0.86	0.86	0.76	0.62	0.62	0.60	0.58	0.58	0.53	0.50	0.49
Nitrogen Oxide (million tons)	0.24	0.22	0.21	0.21	0.16	0.16	0.16	0.16	0.17	0.17	0.14	0.14	0.14
Mercury (tons)	5.00	4.73	4.86	4.78	4.73	4.46	4.54	4.15	3.98	2.94	2.81	2.61	2.54

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	31.72	31.72	31.60	31.60	31.60	31.46	31.46	31.46	31.46	31.46	31.46	31.46	31.46	0.4%
Oil and Natural Gas Steam 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	-20.2%
Combined Cycle	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.75	0.5%
Combustion Turbine/Diesel	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	15.06	-0.5%
Nuclear Power	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	13.24	-0.4%
Pumped Storage/Other 3/	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.0%
Fuel Cells	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	--
Renewable Sources 4/	8.08	8.53	8.94	9.27	9.35	9.97	10.55	11.13	11.20	11.27	11.35	11.42	11.71	10.2%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.19	0.28	0.36	0.43	--
<b>Total Capacity</b>	<b>76.15</b>	<b>76.59</b>	<b>76.89</b>	<b>77.21</b>	<b>77.29</b>	<b>77.77</b>	<b>78.35</b>	<b>78.94</b>	<b>79.10</b>	<b>79.27</b>	<b>79.43</b>	<b>79.57</b>	<b>79.09</b>	<b>0.6%</b>
<b>Cumulative Planned Additions 6/</b>														
Coal	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	--
Combustion Turbine/Diesel	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	--
Distributed Generation 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	--
<b>Total Planned Additions</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>5.65</b>	<b>--</b>
<b>Cumulative Unplanned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	--
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	5.50	5.94	6.36	6.68	6.76	7.38	7.96	8.54	8.61	8.69	8.76	8.83	9.12	--
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.19	0.28	0.36	0.43	--
<b>Total Unplanned Additions</b>	<b>5.50</b>	<b>5.94</b>	<b>6.36</b>	<b>6.68</b>	<b>6.76</b>	<b>7.38</b>	<b>7.96</b>	<b>8.55</b>	<b>8.72</b>	<b>8.88</b>	<b>9.04</b>	<b>9.19</b>	<b>10.08</b>	<b>--</b>
<b>Cumulative Total Additions</b>	<b>11.15</b>	<b>11.59</b>	<b>12.00</b>	<b>12.33</b>	<b>12.41</b>	<b>13.03</b>	<b>13.61</b>	<b>14.20</b>	<b>14.37</b>	<b>14.53</b>	<b>14.69</b>	<b>14.83</b>	<b>15.73</b>	<b>--</b>

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	0.32	0.32	0.44	0.44	0.44	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	--
Oil and Natural Gas Steam 3/	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	--
Combined Cycle	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	--
Combustion Turbine/Diesel	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	3.65	3.65	3.77	3.77	3.77	3.91	3.91	3.91	3.91	3.91	3.91	3.91	5.29	--
<b>End-Use Sectors 8/</b>														
Coal	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	0.1%
Petroleum	0.19	0.19	0.19	0.39	0.39	0.39	0.34	0.34	0.34	0.36	0.36	0.36	0.36	3.2%
Natural Gas	0.41	0.42	0.44	0.47	0.48	0.50	0.51	0.52	0.54	0.55	0.57	0.59	0.61	4.1%
Other Gaseous Fuels	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	-0.6%
Renewable Sources 4/	0.26	0.28	0.31	0.41	0.62	0.62	0.62	0.62	0.62	0.63	0.63	0.63	0.64	4.9%
Other	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%
Total	1.63	1.67	1.70	2.04	2.27	2.28	2.23	2.25	2.27	2.31	2.33	2.35	2.38	2.3%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	85.95	86.26	86.41	86.45	86.93	87.48	88.34	88.83	89.61	90.43	91.43	91.96	92.71	0.4%
Commercial/Other	108.71	110.27	111.82	113.46	115.03	116.57	118.13	119.70	121.30	122.92	124.48	126.02	127.49	1.4%
Industrial	89.87	89.67	89.36	89.20	88.63	88.24	87.84	87.44	87.21	86.86	86.33	85.78	85.30	0.0%
Transportation	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.30	0.6%
Total Sales	284.81	286.47	287.87	289.40	290.88	292.58	294.60	296.26	298.42	300.51	302.54	304.07	305.80	0.6%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	1.65	1.23	0.82	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-22.6%
Gross Interregional Electricity Exports	70.55	68.59	65.13	65.03	66.77	65.67	67.53	67.20	64.68	62.02	60.66	59.66	59.39	1.3%
Purchases from Combined Heat and Power 8/	1.21	1.43	1.64	2.50	4.33	4.32	4.33	4.35	4.36	4.37	4.39	4.40	4.42	7.7%
Electric Power Sector Generation for Custome	368.30	368.28	366.50	367.55	369.45	370.15	374.12	375.54	375.29	374.81	375.58	376.18	377.70	0.9%
Total Net Energy for Load	300.60	302.35	303.84	305.44	307.01	308.80	310.93	312.68	314.96	317.17	319.31	320.92	322.75	0.7%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	201.02	199.50	194.75	194.67	196.90	195.78	197.47	196.88	196.39	195.65	195.80	196.40	205.44	0.7%
Petroleum	1.00	1.00	1.03	1.03	1.06	1.13	1.14	1.14	1.15	1.15	1.13	1.14	1.05	1.3%
Natural Gas	16.83	15.06	15.56	15.58	15.66	14.24	14.24	14.25	14.29	14.33	14.45	14.40	15.70	0.8%
Nuclear	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	110.24	-0.3%
Pumped Storage/Other 9/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	-2.3%
Renewable Sources 10/	34.10	37.38	39.82	40.94	40.48	43.66	45.93	47.93	48.11	48.34	48.85	48.90	46.98	11.8%
Total Generation	370.28	370.27	368.50	369.55	371.44	372.15	376.12	377.53	377.28	376.81	377.57	378.18	379.68	0.9%
Sales to Customers	368.30	368.28	366.50	367.55	369.45	370.15	374.12	375.54	375.29	374.81	375.58	376.18	377.70	0.9%
Generation for Own Use	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.97	-0.7%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.12	0.16	0.19	--

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	0.0%
Petroleum	0.46	0.46	0.46	0.68	1.35	1.52	1.72	1.72	1.72	1.89	1.89	1.89	1.89	8.4%
Natural Gas	2.52	2.61	2.72	2.84	3.01	3.13	3.26	3.36	3.47	3.60	3.72	3.86	4.01	5.1%
Other Gaseous Fuels	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	-0.8%
Renewable Sources 10/	1.72	1.94	2.15	3.01	4.82	4.81	4.83	4.84	4.85	4.87	4.88	4.89	4.90	5.7%
Other	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	-1.2%
Total	8.79	9.10	9.42	10.62	13.27	13.55	13.89	14.01	14.13	14.45	14.58	14.73	14.89	3.3%
Sales to Utilities	1.21	1.43	1.64	2.50	4.33	4.32	4.33	4.35	4.36	4.37	4.39	4.40	4.42	7.7%
Generation for Own Use	7.58	7.68	7.78	8.12	8.95	9.23	9.56	9.67	9.77	10.07	10.19	10.32	10.47	2.3%
<b>Total Electricity Generation</b>	<b>379.07</b>	<b>379.37</b>	<b>377.92</b>	<b>380.17</b>	<b>384.72</b>	<b>385.70</b>	<b>390.01</b>	<b>391.55</b>	<b>391.46</b>	<b>391.34</b>	<b>392.28</b>	<b>393.06</b>	<b>394.76</b>	<b>0.9%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	9.9	9.8	9.8	9.7	9.7	9.7	9.7	9.7	9.7	9.6	9.7	9.7	9.8	0.4%
Commercial	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.8	7.9	8.0	0.1%
Industrial	5.2	5.2	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.1	5.2	0.2%
Transportation	7.7	7.7	7.6	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.5	0.1%
All Sectors Average	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.6	7.6	7.8	0.3%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.7	4.8	4.9	0.3%
Transmission	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.2%
Distribution	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	-0.1%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	2.11	2.09	2.04	2.04	2.06	2.05	2.07	2.07	2.06	2.05	2.06	2.06	2.16	0.6%
Natural Gas	0.14	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.5%
Oil	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	0.2%
Total	2.26	2.23	2.18	2.18	2.21	2.19	2.21	2.20	2.20	2.19	2.19	2.20	2.31	0.6%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.49	1.49	1.50	1.50	1.51	1.52	1.52	1.53	1.54	1.54	1.55	1.56	1.57	0.4%
Natural Gas	5.21	5.28	5.16	5.05	5.18	5.29	5.41	5.53	5.63	5.74	5.96	6.12	6.26	-0.2%
Distillate Fuel Oil	10.00	10.14	10.25	10.36	10.51	10.70	10.94	11.15	11.39	11.57	11.79	12.04	12.18	-0.6%
Residual Fuel Oil	17.40	18.16	18.80	19.33	20.09	21.05	21.90	22.92	23.89	23.09	24.08	25.18	25.91	-0.1%
Biomass	1.96	2.00	1.95	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.94	1.95	1.74	-0.3%
<b>Emissions 12/</b>														
Total Carbon (million tons)	63.96	63.29	61.87	61.87	62.61	62.12	62.76	62.59	62.47	62.24	62.37	62.55	65.65	0.6%
Carbon Dioxide (million tons)	234.53	232.06	226.86	226.86	229.58	227.78	230.12	229.49	229.04	228.23	228.67	229.34	240.70	0.6%
Sulfur Dioxide (million tons)	0.45	0.44	0.38	0.35	0.36	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.36	-3.8%
Nitrogen Oxide (million tons)	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	-2.0%
Mercury (tons)	2.23	2.22	2.09	2.09	2.14	2.05	1.98	1.96	1.95	1.98	1.89	1.85	1.77	-4.0%

Table 65. Electric Power Projections for EMM Region  
Mid-America Interconnected Network - 04

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 66. Electricity Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	18.62	18.61	19.11	19.11	18.87	18.87	19.05	19.06	19.24	19.46	19.74	19.98	20.21
Oil and Natural Gas Steam 2/	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.47	0.47	0.47	0.47	0.47	0.47
Combined Cycle	1.66	2.16	2.29	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
Combustion Turbine/Diesel	7.72	7.82	8.02	8.12	8.33	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
Nuclear Power	3.08	3.08	3.08	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	5.07	5.28	6.02	6.27	6.38	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.06	0.07
Total Capacity	36.64	37.44	39.01	39.92	40.03	40.45	40.63	40.62	40.80	41.03	41.32	41.57	41.81
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.12	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Combustion Turbine/Diesel	0.00	0.00	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.78	1.03	1.15	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.86	2.75	2.87	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.19	0.37	0.59	0.87	1.10	1.34
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.21	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	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
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.06	0.07
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.23	0.63	0.81	0.82	1.01	1.23	1.52	1.77	2.01
Cumulative Total Additions	0.00	0.00	1.86	2.75	3.10	3.52	3.70	3.71	3.89	4.12	4.41	4.66	4.90

Table 66. Electric Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.29	0.29	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.29	0.29	0.53	0.53	0.53	0.55	0.55	0.55	0.55	0.55	0.55
<b>End-Use Sectors 8/</b>													
Coal	0.57	0.58	0.64	0.64	0.64	0.64	0.95	0.95	0.95	0.95	1.07	1.19	1.30
Petroleum	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Natural Gas	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.10	0.11	0.12	0.12	0.13	0.14
Other Gaseous Fuels	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable Sources 4/	0.13	0.14	0.14	0.14	0.14	0.15	0.17	0.18	0.18	0.19	0.20	0.20	0.21
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	0.82	0.82	0.89	0.90	0.91	0.92	1.26	1.28	1.29	1.31	1.44	1.57	1.70
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	53.54	53.30	55.81	55.46	56.23	56.84	56.99	57.37	55.89	55.76	55.83	56.16	56.25
Commercial/Other	47.13	47.87	49.23	48.91	49.96	50.32	50.90	51.61	52.45	53.34	54.26	55.17	56.00
Industrial	50.60	52.27	53.28	55.00	51.05	52.73	53.83	54.03	53.90	54.08	54.54	54.89	55.11
Transportation	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
Total Sales	151.31	153.49	158.36	159.42	157.29	159.94	161.77	163.05	162.28	163.23	164.68	166.27	167.40
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	12.93	13.23	12.68	12.60	8.99	5.94	8.25	9.22	8.96	8.64	9.36	8.75	9.20
Gross International Exports	3.50	4.54	3.68	3.56	3.56	3.55	3.55	3.55	3.65	3.67	3.60	3.65	3.60
Gross Interregional Electricity Imports	9.31	10.19	6.84	5.50	4.88	5.31	6.08	7.63	8.42	10.34	7.06	6.22	4.26
Gross Interregional Electricity Exports	12.09	13.56	10.63	11.95	13.56	9.12	13.19	15.65	18.96	22.53	21.92	21.73	21.91
Purchases from Combined Heat and Power 8/	1.10	1.10	1.09	1.10	1.11	1.14	1.99	2.01	2.02	2.15	2.44	2.74	3.05
Electric Power Sector Generation for Custome	160.97	159.61	165.75	169.23	172.69	173.36	175.12	176.08	177.75	180.28	183.07	185.77	188.32
Total Net Energy for Load	168.72	166.02	172.06	172.93	170.55	173.07	174.70	175.73	174.55	175.21	176.40	178.11	179.32
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	119.29	116.11	120.81	121.34	122.41	122.25	124.18	125.07	127.00	129.29	131.93	134.40	136.90
Petroleum	0.97	0.68	0.77	0.83	0.91	0.91	0.72	0.71	0.69	0.60	0.61	0.62	0.62
Natural Gas	4.46	4.32	1.74	2.08	3.09	3.04	3.11	3.24	3.02	3.35	3.48	3.70	3.75
Nuclear	24.89	25.57	23.96	23.94	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69
Pumped Storage/Other 9/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Renewable Sources 10/	12.09	13.90	18.71	21.29	22.83	23.71	23.67	23.62	23.60	23.60	23.61	23.62	23.61
Total Generation	161.97	160.84	166.27	169.75	173.21	173.88	175.65	176.60	178.28	180.81	183.60	186.31	188.86
Sales to Customers	160.97	159.61	165.75	169.23	172.69	173.36	175.12	176.08	177.75	180.28	183.07	185.77	188.32
Generation for Own Use	1.00	1.23	0.52	0.52	0.52	0.52	0.53	0.53	0.53	0.53	0.53	0.54	0.54
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03

Table 66. Electricity Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	2.61	2.70	2.95	2.95	2.95	2.95	5.27	5.27	5.27	5.27	6.14	7.01	7.88
Petroleum	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Natural Gas	0.25	0.16	0.19	0.24	0.31	0.37	0.42	0.48	0.54	0.60	0.66	0.73	0.80
Other Gaseous Fuels	0.07	0.07	0.07	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<b>Renewable Sources 10/</b>													
Other	0.93	0.93	0.93	0.93	0.95	1.01	1.17	1.19	1.21	1.34	1.37	1.41	1.45
Total	0.07	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Total	3.96	3.95	4.21	4.26	4.29	4.41	6.95	7.03	7.11	7.30	8.26	9.23	10.21
Sales to Utilities	1.10	1.10	1.09	1.10	1.11	1.14	1.99	2.01	2.02	2.15	2.44	2.74	3.05
Generation for Own Use	2.86	2.85	3.11	3.15	3.18	3.28	4.96	5.02	5.08	5.14	5.81	6.49	7.16
<b>Total Electricity Generation</b>	<b>165.93</b>	<b>164.79</b>	<b>170.48</b>	<b>174.01</b>	<b>177.51</b>	<b>178.31</b>	<b>182.60</b>	<b>183.65</b>	<b>185.40</b>	<b>188.12</b>	<b>191.88</b>	<b>195.57</b>	<b>199.10</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	8.3	8.5	7.8	7.6	8.1	8.3	8.3	8.2	8.2	8.2	8.1	8.0	8.0
Commercial	6.7	6.9	6.3	6.4	6.6	6.9	6.9	6.8	6.8	6.7	6.6	6.6	6.6
Industrial	5.0	5.1	4.7	4.9	5.1	5.3	5.2	5.2	5.1	5.1	5.1	5.0	5.0
Transportation	5.8	5.8	5.7	6.1	6.2	6.5	6.5	6.5	6.5	6.5	6.4	6.4	6.4
All Sectors Average	6.7	6.8	6.3	6.3	6.6	6.9	6.8	6.7	6.7	6.7	6.6	6.6	6.5
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	3.9	4.1	3.5	3.6	3.8	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.7
Transmission	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
Distribution	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.30	1.29	1.33	1.34	1.35	1.35	1.37	1.38	1.40	1.42	1.45	1.47	1.49
Natural Gas	0.05	0.04	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Oil	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	1.36	1.34	1.36	1.37	1.39	1.39	1.41	1.42	1.44	1.46	1.48	1.51	1.53
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.11	1.14	1.18	1.22	1.26	1.30	1.31	1.29	1.28	1.29	1.28	1.27	1.28
Natural Gas	7.95	6.49	6.75	7.08	7.16	6.68	6.37	6.15	5.88	5.70	5.59	5.55	5.60
Distillate Fuel Oil	12.85	13.58	14.82	17.76	13.91	13.28	12.71	11.90	11.21	10.93	10.32	9.89	9.91
Residual Fuel Oil	6.23	6.15	6.51	17.01	10.22	9.43	8.89	7.48	7.09	6.93	6.48	6.17	6.16
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
<b>Emissions 12/</b>													
Total Carbon (million tons)	39.80	38.81	39.69	39.96	40.45	40.38	40.92	41.25	41.81	42.47	43.19	43.89	44.58
Carbon Dioxide (million tons)	145.92	142.30	145.52	146.52	148.31	148.05	150.04	151.26	153.30	155.72	158.35	160.93	163.44
Sulfur Dioxide (million tons)	0.40	0.35	0.35	0.35	0.36	0.31	0.29	0.26	0.24	0.24	0.27	0.24	0.24
Nitrogen Oxide (million tons)	0.29	0.26	0.26	0.25	0.21	0.20	0.20	0.20	0.20	0.20	0.18	0.18	0.18
Mercury (tons)	3.79	3.56	3.52	3.58	3.50	2.99	2.79	2.15	2.58	1.66	1.67	1.59	1.60



Table 66. Electricity Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	20.43	20.48	20.56	20.56	20.56	20.56	20.56	20.56	20.56	20.53	20.53	20.53	20.53	0.4%
Oil and Natural Gas Steam 2/	0.47	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.44	0.44	0.44	0.44	-0.4%
Combined Cycle	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	1.1%
Combustion Turbine/Diesel	8.72	8.83	9.04	9.32	9.47	9.78	10.09	10.35	10.63	10.96	11.24	11.48	11.71	1.7%
Nuclear Power	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	2.53	-0.8%
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	0.8%
Distributed Generation 5/	0.09	0.10	0.11	0.13	0.14	0.15	0.17	0.18	0.20	0.21	0.26	0.30	0.34	--
<b>Total Capacity</b>	<b>42.04</b>	<b>42.21</b>	<b>42.51</b>	<b>42.81</b>	<b>42.97</b>	<b>43.29</b>	<b>43.62</b>	<b>43.89</b>	<b>44.18</b>	<b>44.49</b>	<b>44.81</b>	<b>45.10</b>	<b>44.79</b>	<b>0.7%</b>
<b>Cumulative Planned Additions 6/</b>														
Coal	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	--
Combustion Turbine/Diesel	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	--
Distributed Generation 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	--
<b>Total Planned Additions</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>2.89</b>	<b>--</b>
<b>Cumulative Unplanned Additions 6/</b>														
Coal	1.55	1.60	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.60	0.71	0.92	1.20	1.35	1.66	1.97	2.23	2.51	2.84	3.12	3.36	3.59	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Distributed Generation 5/	0.09	0.10	0.11	0.13	0.14	0.15	0.17	0.18	0.20	0.21	0.26	0.30	0.34	--
<b>Total Unplanned Additions</b>	<b>2.24</b>	<b>2.41</b>	<b>2.71</b>	<b>3.01</b>	<b>3.18</b>	<b>3.49</b>	<b>3.83</b>	<b>4.10</b>	<b>4.39</b>	<b>4.74</b>	<b>5.06</b>	<b>5.35</b>	<b>5.61</b>	<b>--</b>
<b>Cumulative Total Additions</b>	<b>5.13</b>	<b>5.30</b>	<b>5.60</b>	<b>5.90</b>	<b>6.06</b>	<b>6.38</b>	<b>6.72</b>	<b>6.99</b>	<b>7.28</b>	<b>7.62</b>	<b>7.95</b>	<b>8.24</b>	<b>8.50</b>	<b>--</b>

Table 66. Electric Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.55	0.55	0.55	0.55	--
Oil and Natural Gas Steam 3/	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.05	0.05	0.05	0.05	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	0.55	0.55	0.55	0.55	0.55	0.55	0.56	0.56	0.56	0.60	0.60	0.60	1.17	--
<b>End-Use Sectors 8/</b>														
Coal	1.62	1.69	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	4.6%
Petroleum	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.6%
Natural Gas	0.15	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.22	0.23	0.24	5.6%
Other Gaseous Fuels	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	0.1%
Renewable Sources 4/	0.24	0.28	0.29	0.31	0.42	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.44	5.1%
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Total	2.05	2.18	2.21	2.24	2.36	2.36	2.37	2.38	2.39	2.40	2.41	2.42	2.43	4.6%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	56.50	56.74	56.90	56.96	57.29	57.69	58.27	58.61	59.14	59.69	60.37	60.75	61.26	0.6%
Commercial/Other	56.80	57.61	58.43	59.28	60.12	60.95	61.77	62.61	63.44	64.27	65.09	65.89	66.68	1.4%
Industrial	55.15	55.02	54.78	54.73	54.40	54.17	53.93	53.64	53.50	53.29	52.98	52.67	52.38	0.0%
Transportation	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	0.1%
Total Sales	168.50	169.42	170.15	171.01	171.86	172.85	174.02	174.91	176.12	177.29	178.48	179.36	180.36	0.7%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	9.30	9.10	8.36	8.36	8.36	8.36	8.36	8.37	8.51	8.37	8.37	8.51	8.52	-1.8%
Gross International Exports	3.57	3.55	3.55	3.55	3.46	3.38	3.21	3.05	3.05	3.05	3.05	3.05	3.05	-1.6%
Gross Interregional Electricity Imports	4.46	2.69	2.27	1.20	1.77	2.79	5.37	3.37	3.58	3.66	3.65	3.92	4.15	-3.7%
Gross Interregional Electricity Exports	24.04	22.49	21.44	20.74	20.29	19.96	21.71	18.88	17.49	16.33	17.03	14.78	14.07	0.2%
Purchases from Combined Heat and Power 8/	3.98	4.54	4.61	4.74	5.68	5.58	5.59	5.60	5.61	5.62	5.63	5.64	5.66	7.0%
Electric Power Sector Generation for Custome	190.38	191.19	192.02	193.19	192.04	191.78	192.03	191.97	191.51	191.66	193.64	191.89	192.02	0.8%
Total Net Energy for Load	180.50	181.48	182.27	183.20	184.10	185.17	186.42	187.37	188.67	189.93	191.21	192.14	193.22	0.6%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	139.14	140.13	140.69	140.81	140.63	140.57	140.78	140.71	140.75	140.79	140.98	140.73	140.74	0.8%
Petroleum	0.62	0.66	0.74	0.74	0.83	0.84	0.85	0.83	0.83	0.83	0.83	0.82	0.82	0.8%
Natural Gas	3.51	3.29	3.58	4.69	3.62	3.42	3.44	3.44	2.94	3.05	4.85	3.43	3.57	-0.8%
Nuclear	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	-0.3%
Pumped Storage/Other 9/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.0%
Renewable Sources 10/	23.69	23.68	23.58	23.52	23.54	23.53	23.54	23.56	23.57	23.57	23.56	23.48	23.48	2.2%
Total Generation	190.92	191.74	192.56	193.73	192.59	192.33	192.57	192.51	192.06	192.20	194.19	192.44	192.57	0.8%
Sales to Customers	190.38	191.19	192.02	193.19	192.04	191.78	192.03	191.97	191.51	191.66	193.64	191.89	192.02	0.8%
Generation for Own Use	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	-3.3%
Distributed Generation 5/	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.09	0.11	0.13	0.15	--

Table 66. Electric Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	10.24	10.78	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	6.0%
Petroleum	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	3.1%
Natural Gas	0.87	0.94	1.01	1.08	1.14	1.20	1.25	1.29	1.33	1.37	1.42	1.46	1.51	9.9%
Other Gaseous Fuels	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-5.7%
Renewable Sources 10/	1.66	2.06	2.11	2.25	3.20	3.11	3.13	3.16	3.18	3.20	3.22	3.23	3.25	5.4%
Other	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	-2.3%
Total	12.86	13.87	14.08	14.29	15.31	15.28	15.35	15.42	15.49	15.55	15.61	15.67	15.74	5.9%
Sales to Utilities	3.98	4.54	4.61	4.74	5.68	5.58	5.59	5.60	5.61	5.62	5.63	5.64	5.66	7.0%
Generation for Own Use	8.88	9.33	9.47	9.55	9.63	9.70	9.76	9.82	9.87	9.93	9.98	10.03	10.09	5.4%
<b>Total Electricity Generation</b>	<b>203.82</b>	<b>205.65</b>	<b>206.69</b>	<b>208.07</b>	<b>207.96</b>	<b>207.67</b>	<b>208.00</b>	<b>208.01</b>	<b>207.63</b>	<b>207.85</b>	<b>209.91</b>	<b>208.24</b>	<b>208.46</b>	<b>1.0%</b>
<b>End-Use Prices</b>														
<b>(2006 cents per kilowatthour)</b>														
Residential	8.0	8.0	8.0	8.1	8.0	8.0	8.0	8.0	7.9	7.9	7.9	7.9	7.9	-0.3%
Commercial	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	-0.2%
Industrial	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	-0.1%
Transportation	6.4	6.5	6.5	6.5	6.6	6.2	6.2	6.2	6.3	6.3	6.4	6.4	6.4	0.4%
All Sectors Average	6.5	6.5	6.6	6.6	6.6	6.6	6.6	6.5	6.5	6.5	6.6	6.6	6.6	-0.2%
<b>Prices by Service Category</b>														
<b>(2006 cents per kilowatthour)</b>														
Generation	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.8	3.8	-0.3%
Transmission	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2%
Distribution	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	-0.4%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.51	1.52	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	0.7%
Natural Gas	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.03	-1.2%
Oil	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	0.7%
Total	1.55	1.56	1.57	1.58	1.57	1.57	1.57	1.57	1.57	1.57	1.59	1.57	1.57	0.7%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.31	1.31	1.32	1.32	1.33	1.33	1.34	1.35	1.36	1.37	1.38	1.38	1.39	0.8%
Natural Gas	5.65	5.70	5.50	5.34	5.49	5.59	5.72	5.87	6.01	6.16	6.36	6.55	6.73	0.1%
Distillate Fuel Oil	10.05	10.19	10.30	10.40	10.55	10.74	10.98	11.19	11.43	11.61	11.83	12.08	12.22	-0.4%
Residual Fuel Oil	6.29	6.57	6.79	6.92	6.97	7.16	7.35	7.51	7.66	7.68	7.86	7.95	8.11	1.2%
Biomass	1.87	1.87	1.76	1.72	1.68	1.64	1.60	1.56	1.56	1.57	1.56	1.55	1.55	-0.8%
<b>Emissions 12/</b>														
Total Carbon (million tons)	45.12	45.42	45.62	45.81	45.72	45.65	45.74	45.71	45.66	45.70	46.02	45.73	45.73	0.7%
Carbon Dioxide (million tons)	165.45	166.54	167.26	167.97	167.63	167.38	167.70	167.61	167.42	167.56	168.76	167.68	167.68	0.7%
Sulfur Dioxide (million tons)	0.24	0.22	0.21	0.20	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	-3.0%
Nitrogen Oxide (million tons)	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	-1.6%
Mercury (tons)	1.54	1.54	1.46	1.49	1.18	1.16	1.16	1.14	1.12	1.12	1.11	1.10	1.08	-4.9%

Table 66. Electric Power Projections for EMM Region  
Mid-Continent Area Power Pool - 05

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 67. Electric Power Projections for EMM Region  
 Northeast Power Coordinating Council / New York - 06

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	3.19	3.19	3.00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83
Oil and Natural Gas Steam 2/	11.63	11.27	11.20	11.20	11.20	11.20	11.20	11.07	11.07	11.07	11.07	11.07	11.07
Combined Cycle	7.37	7.74	7.74	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28
Combustion Turbine/Diesel	5.11	5.09	5.26	5.26	5.26	5.26	5.26	4.77	4.77	4.77	4.77	4.77	4.77
Nuclear Power	5.84	5.84	5.84	5.84	5.84	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92
Pumped Storage/Other 3/	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Fuel Cells	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
Renewable Sources 4/	4.81	5.02	5.03	5.31	5.31	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Distributed Generation 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
Total Capacity	39.26	39.44	39.36	40.01	40.01	40.14	40.14	39.53	39.53	39.53	39.53	39.53	39.53
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Combustion Turbine/Diesel	0.00	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.05	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Distributed Generation 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
Total Planned Additions	0.00	0.00	0.18	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Cumulative Total Additions	0.00	0.00	0.18	1.01	1.01	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05

Table 67. Electric Power Projections for EMM Region  
 Northeast Power Coordinating Council / New York - 06

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.19	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Oil and Natural Gas Steam 3/	0.00	0.00	0.07	0.07	0.07	0.07	0.07	0.19	0.19	0.19	0.19	0.19	0.19
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.49	0.49	0.49
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.26	0.43	0.43	0.43	0.43	1.04	1.04	1.04	1.04	1.04	1.04
<b>End-Use Sectors 8/</b>													
Coal	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Petroleum	0.06	0.07	0.07	0.07	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Natural Gas	0.12	0.12	0.13	0.14	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.35
Other Gaseous Fuels	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
Renewable Sources 4/	0.08	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13
Other	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
Total	0.40	0.41	0.43	0.44	0.65	0.67	0.68	0.69	0.70	0.71	0.73	0.75	0.78
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	52.52	48.80	51.83	51.97	52.52	52.85	53.00	53.18	51.56	51.25	51.10	51.23	51.19
Commercial/Other	73.74	70.80	74.85	75.97	74.91	75.69	76.84	77.81	78.85	80.08	81.17	82.25	83.18
Industrial	24.20	22.91	21.90	21.73	21.52	22.08	22.48	22.61	22.66	22.57	22.49	22.42	22.26
Transportation	1.43	1.40	1.44	1.46	1.49	1.53	1.56	1.59	1.62	1.64	1.67	1.69	1.71
Total Sales	151.89	143.91	150.02	151.13	150.45	152.16	153.88	155.19	154.70	155.54	156.43	157.59	158.34
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	10.72	12.50	14.93	11.78	12.39	8.23	7.26	7.81	9.69	9.37	2.71	3.14	4.16
Gross International Exports	3.42	2.51	3.72	3.44	3.44	3.38	3.44	3.58	3.64	3.41	3.18	2.96	2.84
Gross Interregional Electricity Imports	18.76	10.22	11.75	13.22	13.77	5.19	5.34	6.21	6.12	9.27	10.00	9.66	11.55
Gross Interregional Electricity Exports	6.16	6.96	8.67	9.41	10.63	3.69	3.68	3.95	3.58	4.11	2.89	2.52	2.31
Purchases from Combined Heat and Power 8/	0.52	0.50	0.41	0.42	0.43	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52
Electric Power Sector Generation for Custome	147.16	141.39	147.23	150.32	149.58	156.84	159.24	159.32	156.37	154.41	159.54	160.07	157.63
Total Net Energy for Load	167.59	155.13	161.93	162.89	162.10	163.64	165.18	166.28	165.44	166.03	166.67	167.91	168.71
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	17.08	17.88	18.65	17.87	17.16	17.24	16.86	16.69	16.43	16.32	16.52	16.61	16.79
Petroleum	24.24	6.96	8.40	8.61	8.61	8.67	8.72	8.99	8.94	8.96	9.01	9.02	9.00
Natural Gas	32.22	41.77	48.28	51.48	51.19	57.56	59.72	59.43	56.47	54.29	59.09	59.41	56.80
Nuclear	47.92	48.05	46.62	46.39	45.91	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58
Pumped Storage/Other 9/	0.00	0.02	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Renewable Sources 10/	27.50	28.32	26.48	27.16	27.90	27.99	28.57	28.82	29.15	29.45	29.54	29.64	29.66
Total Generation	148.95	143.00	148.81	151.90	151.15	158.42	160.82	160.88	157.94	155.98	161.11	161.64	159.20
Sales to Customers	147.16	141.39	147.23	150.32	149.58	156.84	159.24	159.32	156.37	154.41	159.54	160.07	157.63
Generation for Own Use	1.79	1.62	1.58	1.58	1.58	1.58	1.58	1.57	1.57	1.57	1.57	1.57	1.57
Distributed Generation 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

Table 67. Electric Power Projections for EMM Region  
Northeast Power Coordinating Council / New York - 06

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.66	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Petroleum	0.31	0.21	0.21	0.21	0.24	0.24	0.23	0.24	0.24	0.24	0.24	0.24	0.24
Natural Gas	0.66	0.65	0.73	0.81	1.40	1.47	1.54	1.64	1.71	1.79	1.92	2.04	2.16
Other Gaseous Fuels	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
Renewable Sources 10/	0.56	0.60	0.61	0.62	0.62	0.64	0.65	0.65	0.65	0.65	0.66	0.66	0.67
Other	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	2.29	2.21	2.21	2.30	2.91	3.00	3.07	3.17	3.25	3.33	3.47	3.59	3.72
Sales to Utilities	0.52	0.50	0.41	0.42	0.43	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52
Generation for Own Use	1.76	1.71	1.81	1.88	2.47	2.55	2.61	2.70	2.77	2.84	2.97	3.08	3.20
<b>Total Electricity Generation</b>	<b>151.24</b>	<b>145.21</b>	<b>151.02</b>	<b>154.20</b>	<b>154.06</b>	<b>161.42</b>	<b>163.89</b>	<b>164.06</b>	<b>161.19</b>	<b>159.31</b>	<b>164.58</b>	<b>165.23</b>	<b>162.92</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	16.2	16.9	17.3	17.6	18.1	17.6	17.5	17.7	17.6	17.5	17.6	17.7	17.9
Commercial	14.8	15.5	15.3	15.5	15.7	14.9	14.3	14.2	13.8	13.6	13.6	13.6	13.8
Industrial	8.5	9.4	9.0	9.2	9.4	8.8	8.5	8.5	8.1	8.0	7.9	8.0	8.1
Transportation	14.5	14.0	13.9	14.6	14.8	14.2	13.9	14.0	13.6	13.4	13.4	13.4	13.5
All Sectors Average	14.4	15.3	15.1	15.3	15.6	14.9	14.6	14.6	14.2	14.1	14.1	14.1	14.3
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	7.6	8.5	8.3	8.6	8.7	8.1	7.7	7.7	7.3	7.1	7.1	7.2	7.3
Transmission	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Distribution	4.2	4.3	4.3	4.2	4.3	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	0.18	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Natural Gas	0.31	0.40	0.44	0.46	0.46	0.50	0.51	0.51	0.49	0.47	0.51	0.51	0.49
Oil	0.25	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total	0.74	0.66	0.73	0.74	0.73	0.78	0.78	0.78	0.76	0.74	0.78	0.78	0.76
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.89	1.95	1.98	2.00	2.09	2.25	2.25	2.22	2.23	2.21	2.18	2.16	2.16
Natural Gas	9.60	7.55	7.13	7.58	7.81	7.34	7.05	6.81	6.51	6.29	6.16	6.11	6.17
Distillate Fuel Oil	12.02	12.71	14.63	16.77	15.13	14.47	13.77	13.06	12.36	12.08	11.51	11.08	11.09
Residual Fuel Oil	7.54	7.66	8.12	9.84	8.96	8.56	8.17	7.79	7.42	7.02	6.64	6.25	6.27
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.90	1.93	1.95	1.97	2.25	2.27	2.28
<b>Emissions 12/</b>													
Total Carbon (million tons)	14.51	13.82	14.85	14.99	14.68	15.45	15.53	15.49	15.06	14.78	15.45	15.52	15.24
Carbon Dioxide (million tons)	53.22	50.68	54.46	54.95	53.83	56.63	56.93	56.81	55.22	54.18	56.66	56.89	55.88
Sulfur Dioxide (million tons)	0.23	0.22	0.22	0.18	0.15	0.13	0.11	0.13	0.13	0.11	0.11	0.11	0.11
Nitrogen Oxide (million tons)	0.05	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Mercury (tons)	0.85	0.87	0.89	0.75	0.69	0.37	0.33	0.23	0.27	0.19	0.17	0.17	0.17

Table 67. Electric Power Projections for EMM Region  
 Northeast Power Coordinating Council / New York - 06

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	3.03	3.03	3.12	3.34	3.56	3.85	4.10	4.33	4.59	5.00	5.36	5.66	7.14	3.4%
Oil and Natural Gas Steam 2/	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	-0.1%
Combined Cycle	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	0.3%
Combustion Turbine/Diesel	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.63	4.59	4.53	-0.5%
Nuclear Power	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	4.72	4.72	-0.9%
Pumped Storage/Other 3/	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	0.0%
Fuel Cells	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	--
Renewable Sources 4/	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	0.3%
Distributed Generation 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	--
<b>Total Capacity</b>	<b>39.73</b>	<b>39.73</b>	<b>39.82</b>	<b>40.04</b>	<b>40.26</b>	<b>40.55</b>	<b>40.80</b>	<b>41.03</b>	<b>41.29</b>	<b>41.70</b>	<b>41.92</b>	<b>40.97</b>	<b>42.40</b>	<b>0.3%</b>
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	--
Combustion Turbine/Diesel	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	--
Distributed Generation 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	--
<b>Total Planned Additions</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>1.01</b>	<b>--</b>
<b>Cumulative Unplanned Additions 6/</b>														
Coal	0.20	0.20	0.29	0.51	0.73	1.02	1.27	1.51	1.76	2.17	2.53	2.83	4.31	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Distributed Generation 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	--
<b>Total Unplanned Additions</b>	<b>0.25</b>	<b>0.25</b>	<b>0.34</b>	<b>0.55</b>	<b>0.78</b>	<b>1.07</b>	<b>1.32</b>	<b>1.55</b>	<b>1.80</b>	<b>2.22</b>	<b>2.58</b>	<b>2.88</b>	<b>4.36</b>	<b>--</b>
<b>Cumulative Total Additions</b>	<b>1.25</b>	<b>1.25</b>	<b>1.34</b>	<b>1.56</b>	<b>1.78</b>	<b>2.08</b>	<b>2.32</b>	<b>2.56</b>	<b>2.81</b>	<b>3.22</b>	<b>3.58</b>	<b>3.88</b>	<b>5.36</b>	<b>--</b>



Table 67. Electric Power Projections for EMM Region  
Northeast Power Coordinating Council / New York - 06

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	--
Oil and Natural Gas Steam 3/	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.62	0.67	0.73	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.18	2.43	2.49	--
<b>End-Use Sectors 8/</b>														
Coal	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.0%
Petroleum	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	3.6%
Natural Gas	0.37	0.39	0.41	0.43	0.46	0.48	0.51	0.54	0.57	0.60	0.63	0.67	0.71	7.7%
Other Gaseous Fuels	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	--
Renewable Sources 4/	0.14	0.15	0.17	0.18	0.20	0.22	0.24	0.26	0.29	0.32	0.35	0.39	0.43	6.7%
Other	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	--
Total	0.81	0.84	0.87	0.91	0.95	1.00	1.04	1.09	1.15	1.21	1.28	1.35	1.43	5.3%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	51.30	51.44	51.51	51.51	51.77	52.05	52.50	52.72	53.12	53.54	54.06	54.31	54.69	0.5%
Commercial/Other	84.09	85.03	85.96	86.98	87.91	88.76	89.57	90.35	91.11	91.89	92.62	93.39	94.08	1.2%
Industrial	22.03	21.78	21.55	21.36	21.06	20.77	20.48	20.22	19.96	19.78	19.49	19.21	18.99	-0.8%
Transportation	1.74	1.76	1.78	1.80	1.82	1.84	1.86	1.88	1.90	1.92	1.94	1.96	1.98	1.5%
Total Sales	159.16	160.01	160.80	161.66	162.56	163.42	164.41	165.17	166.09	167.13	168.11	168.87	169.75	0.7%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	3.11	5.13	3.06	3.66	3.72	2.83	3.16	3.80	3.66	5.52	6.36	7.01	9.88	-1.0%
Gross International Exports	2.72	2.53	2.42	2.32	2.21	2.19	2.18	2.16	2.16	2.16	2.16	2.16	2.16	-0.6%
Gross Interregional Electricity Imports	12.71	13.47	13.77	13.27	12.89	13.30	13.16	12.44	13.77	12.98	13.63	13.77	13.77	1.2%
Gross Interregional Electricity Exports	1.79	2.03	1.12	0.59	0.19	0.18	1.10	0.83	0.96	1.64	2.69	3.02	3.44	-2.9%
Purchases from Combined Heat and Power 8/	0.53	0.54	0.55	0.57	0.58	0.60	0.61	0.63	0.65	0.67	0.69	0.71	0.73	1.6%
Electric Power Sector Generation for Custome	157.74	155.90	157.49	157.64	158.41	159.77	161.52	162.11	162.01	162.70	163.29	163.62	162.08	0.6%
Total Net Energy for Load	169.58	170.49	171.33	172.24	173.21	174.12	175.18	175.99	176.97	178.07	179.12	179.93	180.87	0.6%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	18.39	18.64	19.51	21.13	22.79	24.96	26.80	28.56	30.42	33.50	36.17	38.40	49.40	4.3%
Petroleum	9.00	8.96	8.97	8.92	8.90	8.86	8.84	8.80	8.69	8.61	8.51	8.42	8.27	0.7%
Natural Gas	55.39	53.25	53.94	52.57	51.70	50.87	50.81	49.63	47.73	45.43	43.40	41.59	38.49	-0.3%
Nuclear	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	37.22	-1.1%
Pumped Storage/Other 9/	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	12.4%
Renewable Sources 10/	29.58	29.67	29.69	29.65	29.65	29.69	29.69	29.74	29.78	29.78	29.83	29.82	29.87	0.2%
Total Generation	159.32	157.48	159.07	159.22	159.99	161.34	163.09	163.68	163.58	164.28	164.86	165.19	163.63	0.6%
Sales to Customers	157.74	155.90	157.49	157.64	158.41	159.77	161.52	162.11	162.01	162.70	163.29	163.62	162.08	0.6%
Generation for Own Use	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.57	1.57	1.55	-0.2%
Distributed Generation 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	--

Table 67. Electric Power Projections for EMM Region  
Northeast Power Coordinating Council / New York - 06

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.0%
Petroleum	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.6%
Natural Gas	2.29	2.43	2.58	2.75	2.93	3.12	3.33	3.54	3.76	3.99	4.23	4.49	4.77	8.6%
Other Gaseous Fuels	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	--
Renewable Sources 10/	0.69	0.71	0.74	0.76	0.79	0.81	0.84	0.87	0.92	0.97	1.02	1.07	1.14	2.7%
Other	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	-10.8%
Total	3.87	4.03	4.21	4.40	4.61	4.82	5.06	5.30	5.57	5.85	6.15	6.46	6.80	4.8%
Sales to Utilities	0.53	0.54	0.55	0.57	0.58	0.60	0.61	0.63	0.65	0.67	0.69	0.71	0.73	1.6%
Generation for Own Use	3.34	3.49	3.66	3.83	4.03	4.23	4.45	4.67	4.92	5.18	5.46	5.75	6.07	5.4%
<b>Total Electricity Generation</b>	<b>163.19</b>	<b>161.51</b>	<b>163.28</b>	<b>163.62</b>	<b>164.59</b>	<b>166.17</b>	<b>168.15</b>	<b>168.98</b>	<b>169.15</b>	<b>170.13</b>	<b>171.01</b>	<b>171.65</b>	<b>170.43</b>	<b>0.7%</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)														
Residential	17.9	17.9	17.9	17.8	17.9	17.9	18.0	18.1	18.2	18.2	18.3	18.4	18.5	0.4%
Commercial	13.8	14.0	14.1	14.0	14.1	14.1	14.2	14.3	14.4	14.4	14.6	14.7	14.7	-0.2%
Industrial	8.2	8.2	8.2	8.1	8.2	8.3	8.4	8.5	8.5	8.5	8.7	8.8	8.9	-0.2%
Transportation	13.6	13.6	13.6	13.4	13.5	13.5	13.6	13.7	13.8	13.8	14.0	14.1	14.2	0.1%
All Sectors Average	14.4	14.5	14.5	14.4	14.5	14.6	14.7	14.8	14.9	14.9	15.1	15.2	15.3	0.0%
<b>Prices by Service Category</b> (2006 cents per kilowatthour)														
Generation	7.4	7.5	7.5	7.4	7.6	7.6	7.7	7.8	7.9	7.9	8.1	8.2	8.2	-0.1%
Transmission	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	0.0%
Distribution	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.6	4.6	0.3%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	0.19	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.30	0.32	0.34	0.42	3.4%
Natural Gas	0.48	0.46	0.47	0.46	0.45	0.45	0.44	0.44	0.42	0.41	0.39	0.38	0.35	-0.5%
Oil	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.9%
Total	0.77	0.75	0.76	0.77	0.77	0.78	0.80	0.80	0.80	0.80	0.81	0.81	0.87	1.1%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	2.24	2.24	2.23	2.21	2.19	2.17	2.15	2.13	2.11	2.10	2.08	2.08	2.07	0.3%
Natural Gas	6.22	6.26	6.18	6.07	6.19	6.25	6.36	6.47	6.55	6.61	6.83	6.96	7.09	-0.3%
Distillate Fuel Oil	11.24	11.38	11.49	11.60	11.71	11.90	12.13	12.35	12.59	12.77	12.98	13.24	13.47	0.2%
Residual Fuel Oil	6.39	6.51	6.62	6.73	6.85	6.98	7.11	7.25	7.36	7.46	7.63	7.79	7.94	0.1%
Biomass	2.30	2.27	2.28	2.27	2.27	2.28	2.28	2.57	2.57	2.57	2.57	2.58	2.56	1.3%
<b>Emissions 12/</b>														
Total Carbon (million tons)	15.45	15.25	15.55	15.73	15.99	16.36	16.74	16.97	17.12	17.49	17.79	18.04	19.97	1.5%
Carbon Dioxide (million tons)	56.64	55.90	57.01	57.69	58.63	59.97	61.39	62.21	62.78	64.12	65.24	66.14	73.21	1.5%
Sulfur Dioxide (million tons)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	-3.6%
Nitrogen Oxide (million tons)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.4%
Mercury (tons)	0.17	0.17	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.20	0.22	-5.6%

Table 67. Electric Power Projections for EMM Region  
Northeast Power Coordinating Council / New York - 06

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 68. Electric Power Projections for EMM Region  
 Northeast Power Coordinating Council / New England - 07

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	3.71	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53
Oil and Natural Gas Steam 2/	7.17	7.17	7.17	7.17	7.17	7.17	7.17	5.73	5.73	5.73	5.73	5.73	5.73
Combined Cycle	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64
Combustion Turbine/Diesel	1.81	1.81	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Nuclear Power	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	2.92	2.98	3.05	3.16	3.16	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.06	0.07
<b>Total Capacity</b>	<b>31.80</b>	<b>31.68</b>	<b>31.80</b>	<b>31.92</b>	<b>31.92</b>	<b>34.27</b>	<b>34.27</b>	<b>32.83</b>	<b>32.84</b>	<b>32.85</b>	<b>32.87</b>	<b>32.89</b>	<b>32.90</b>
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.10	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Distributed Generation 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
<b>Total Planned Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.06	0.07
<b>Total Unplanned Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.35</b>	<b>2.35</b>	<b>2.35</b>	<b>2.36</b>	<b>2.38</b>	<b>2.39</b>	<b>2.41</b>	<b>2.42</b>
<b>Cumulative Total Additions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>0.26</b>	<b>0.26</b>	<b>2.62</b>	<b>2.62</b>	<b>2.62</b>	<b>2.62</b>	<b>2.64</b>	<b>2.66</b>	<b>2.67</b>	<b>2.69</b>

Table 68. Electric Power Projections for EMM Region  
 Northeast Power Coordinating Council / New England - 07

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	1.44	1.44	1.44	1.44	1.44
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.03	0.03	0.03	0.03	0.03	1.47	1.47	1.47	1.47	1.47	1.47
<b>End-Use Sectors 8/</b>													
Coal	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
Petroleum	0.26	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Natural Gas	0.48	0.48	0.52	0.55	0.58	0.60	0.63	0.65	0.68	0.70	0.73	0.75	0.77
Other Gaseous Fuels	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
Renewable Sources 4/	0.62	0.55	0.55	0.55	0.55	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57
Other	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
Total	1.37	1.29	1.32	1.35	1.38	1.42	1.44	1.47	1.49	1.52	1.54	1.57	1.59
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	48.86	46.74	47.41	47.90	48.08	48.46	48.53	48.63	47.25	46.96	46.89	47.09	47.10
Commercial/Other	55.00	54.67	56.12	57.13	56.60	57.28	58.14	58.93	59.86	60.93	62.05	63.17	64.16
Industrial	23.77	22.86	22.98	22.38	22.23	22.78	23.18	23.29	23.34	23.23	23.15	23.08	22.91
Transportation	0.24	0.24	0.23	0.23	0.26	0.28	0.30	0.32	0.33	0.34	0.36	0.38	0.39
Total Sales	127.87	124.51	126.74	127.64	127.17	128.81	130.16	131.18	130.79	131.47	132.44	133.72	134.55
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	9.58	9.32	6.93	8.44	5.98	6.84	7.01	5.99	5.54	4.35	6.98	9.41	9.79
Gross International Exports	0.84	1.16	0.74	0.55	0.54	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Gross Interregional Electricity Imports	7.18	7.98	9.59	10.38	11.56	4.76	4.75	5.01	4.48	4.57	3.54	2.74	2.73
Gross Interregional Electricity Exports	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
Purchases from Combined Heat and Power 8/	1.31	1.20	1.21	1.26	1.30	1.36	1.40	1.44	1.49	1.52	1.56	1.60	1.64
Electric Power Sector Generation for Custome	119.41	114.61	119.80	118.05	118.70	126.07	127.05	128.59	128.87	130.39	129.52	129.21	129.70
Total Net Energy for Load	136.63	131.94	136.80	137.57	137.01	138.52	139.72	140.55	139.88	140.34	141.12	142.48	143.37
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	22.98	22.30	19.56	19.71	20.08	20.48	20.84	21.21	21.59	21.95	22.32	22.68	23.06
Petroleum	11.55	3.39	2.69	2.68	2.71	2.66	2.66	2.52	2.53	2.54	2.52	2.50	2.50
Natural Gas	45.51	46.99	59.37	57.34	57.25	55.27	55.83	56.86	56.67	57.70	56.33	55.55	55.54
Nuclear	29.09	31.09	30.40	30.30	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16
Pumped Storage/Other 9/	0.90	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Renewable Sources 10/	13.53	14.06	10.07	10.31	10.79	19.80	19.86	19.96	20.05	20.18	20.33	20.47	20.60
Total Generation	123.57	118.63	123.09	121.34	121.99	129.37	130.35	131.72	132.01	133.53	132.67	132.37	132.86
Sales to Customers	119.41	114.61	119.80	118.05	118.70	126.07	127.05	128.59	128.87	130.39	129.52	129.21	129.70
Generation for Own Use	4.15	4.02	3.29	3.29	3.29	3.30	3.30	3.13	3.14	3.14	3.15	3.16	3.16
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03

Table 68. Electric Power Projections for EMM Region  
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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.36	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Petroleum	1.26	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Natural Gas	2.14	2.21	2.45	2.68	2.89	3.09	3.28	3.46	3.64	3.82	4.00	4.18	4.36
Other Gaseous Fuels	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
Renewable Sources 10/	3.23	3.14	3.14	3.14	3.14	3.18	3.20	3.20	3.20	3.20	3.20	3.21	3.21
Other	0.13	0.12	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Total	7.13	6.34	6.50	6.73	6.94	7.17	7.38	7.57	7.75	7.93	8.11	8.30	8.48
Sales to Utilities	1.31	1.20	1.21	1.26	1.30	1.36	1.40	1.44	1.49	1.52	1.56	1.60	1.64
Generation for Own Use	5.82	5.14	5.30	5.47	5.63	5.82	5.98	6.12	6.26	6.40	6.55	6.69	6.83
<b>Total Electricity Generation</b>	<b>130.69</b>	<b>124.97</b>	<b>129.59</b>	<b>128.07</b>	<b>128.93</b>	<b>136.54</b>	<b>137.74</b>	<b>139.29</b>	<b>139.76</b>	<b>141.47</b>	<b>140.80</b>	<b>140.69</b>	<b>141.37</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	13.9	16.1	15.4	15.7	16.3	15.8	15.8	16.0	15.8	15.8	15.6	15.6	15.7
Commercial	12.3	14.6	13.1	13.3	13.6	12.9	12.6	12.4	12.0	11.8	11.6	11.5	11.6
Industrial	9.4	11.6	11.5	11.8	11.6	10.5	9.9	9.6	9.0	8.8	8.5	8.4	8.5
Transportation	12.9	12.5	12.7	13.7	13.7	13.1	13.0	13.0	12.7	12.5	12.3	12.2	12.2
All Sectors Average	12.4	14.6	13.7	14.0	14.3	13.6	13.3	13.2	12.9	12.7	12.5	12.4	12.5
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	6.2	8.3	7.4	7.8	8.0	7.2	6.9	6.8	6.5	6.3	6.1	6.1	6.2
Transmission	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Distribution	3.9	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	0.24	0.23	0.21	0.21	0.21	0.21	0.22	0.22	0.23	0.23	0.23	0.24	0.24
Natural Gas	0.35	0.36	0.47	0.45	0.45	0.42	0.42	0.43	0.43	0.44	0.43	0.42	0.42
Oil	0.12	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Total	0.71	0.63	0.71	0.69	0.69	0.67	0.67	0.68	0.68	0.70	0.69	0.69	0.69
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	2.89	2.85	2.92	2.99	3.10	3.16	3.14	3.07	3.03	2.99	3.00	2.95	2.92
Natural Gas	9.65	7.36	7.27	7.90	8.22	7.66	7.41	7.16	6.90	6.62	6.42	6.33	6.38
Distillate Fuel Oil	12.17	12.86	14.80	17.21	13.29	12.62	11.92	11.18	10.47	10.19	9.62	9.18	9.19
Residual Fuel Oil	7.11	7.43	7.85	9.52	9.21	8.80	8.42	8.03	7.66	7.26	6.87	6.48	6.51
Biomass	1.89	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.89	2.18	2.19	2.19
<b>Emissions 12/</b>													
Total Carbon (million tons)	15.05	13.73	14.18	13.88	13.92	13.65	13.77	13.99	14.09	14.34	14.28	14.30	14.42
Carbon Dioxide (million tons)	55.20	50.35	52.01	50.90	51.05	50.05	50.51	51.30	51.66	52.58	52.37	52.42	52.87
Sulfur Dioxide (million tons)	0.18	0.14	0.14	0.13	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.10	0.09
Nitrogen Oxide (million tons)	0.04	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Mercury (tons)	0.56	0.61	0.67	0.59	0.57	0.54	0.55	0.37	0.34	0.32	0.30	0.28	0.29

Table 68. Electric Power Projections for EMM Region  
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	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	0.0%
Oil and Natural Gas Steam 2/	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	-0.9%
Combined Cycle	10.64	10.85	11.16	11.50	11.85	12.10	12.10	12.10	12.10	12.10	12.10	12.10	12.10	0.5%
Combustion Turbine/Diesel	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	0.1%
Nuclear Power	3.90	3.90	3.90	3.90	3.90	3.90	3.90	4.42	4.42	4.95	4.95	4.95	5.61	1.5%
Pumped Storage/Other 3/	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	0.0%
Fuel Cells	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	--
Renewable Sources 4/	5.51	5.51	5.51	5.53	5.53	5.53	5.53	5.56	5.56	5.58	5.58	5.58	5.64	2.7%
Distributed Generation 5/	0.08	0.12	0.17	0.22	0.24	0.25	0.26	0.28	0.29	0.29	0.30	0.30	0.30	--
Total Capacity	32.91	33.16	33.52	33.93	34.29	34.55	34.57	35.12	35.13	35.70	35.70	35.70	36.42	0.6%
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	--
Distributed Generation 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	--
Total Planned Additions	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.00	0.21	0.52	0.86	1.21	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	--
Combustion Turbine/Diesel	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	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	1.05	1.05	1.05	1.71	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	2.35	2.35	2.35	2.37	2.37	2.37	2.37	2.39	2.39	2.42	2.42	2.42	2.47	--
Distributed Generation 5/	0.08	0.12	0.17	0.22	0.24	0.25	0.26	0.28	0.29	0.29	0.30	0.30	0.30	--
Total Unplanned Additions	2.44	2.69	3.05	3.45	3.82	4.08	4.09	4.65	4.66	5.22	5.23	5.23	5.94	--
Cumulative Total Additions	2.70	2.95	3.31	3.72	4.08	4.34	4.35	4.91	4.92	5.49	5.49	5.49	6.21	--

Table 68. Electric Power Projections for EMM Region  
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	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	--
<b>End-Use Sectors 8/</b>														
Coal	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	0.0%
Petroleum	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.0%
Natural Gas	0.80	0.82	0.85	0.87	0.90	0.92	0.95	0.98	1.00	1.03	1.06	1.09	1.13	3.6%
Other Gaseous Fuels	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	--
Renewable Sources 4/	0.57	0.58	0.58	0.58	0.59	0.59	0.60	0.62	0.63	0.64	0.65	0.68	0.70	1.0%
Other	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%
Total	1.62	1.65	1.68	1.71	1.74	1.77	1.81	1.84	1.88	1.92	1.97	2.02	2.08	2.0%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	47.25	47.39	47.52	47.56	47.82	48.12	48.55	48.78	49.16	49.58	50.05	50.27	50.67	0.3%
Commercial/Other	65.08	65.99	66.96	68.00	68.96	69.86	70.70	71.56	72.35	73.20	73.95	74.66	75.50	1.4%
Industrial	22.66	22.40	22.16	21.96	21.64	21.33	21.01	20.72	20.43	20.18	19.87	19.60	19.31	-0.7%
Transportation	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.47	0.48	0.49	0.50	3.2%
Total Sales	135.39	136.18	137.04	137.93	138.85	139.75	140.71	141.53	142.41	143.44	144.36	145.02	145.98	0.7%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	10.05	10.24	9.05	9.23	9.04	9.85	10.46	8.92	8.73	7.20	6.21	7.57	5.82	-1.9%
Gross International Exports	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	-3.5%
Gross Interregional Electricity Imports	1.87	1.90	1.18	0.53	0.03	0.00	0.45	1.22	0.52	0.26	0.44	0.78	1.19	-7.6%
Gross Interregional Electricity Exports	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	--
Purchases from Combined Heat and Power 8/	1.68	1.72	1.76	1.80	1.84	1.88	1.91	1.95	1.99	2.03	2.06	2.10	2.14	2.4%
Electric Power Sector Generation for Custome	131.15	131.73	134.51	135.90	137.54	137.67	137.61	140.20	140.99	143.84	145.59	144.56	146.88	1.0%
Total Net Energy for Load	144.26	145.10	146.01	146.96	147.95	148.90	149.93	150.80	151.73	152.83	153.81	154.52	155.54	0.7%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	23.42	23.79	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	0.3%
Petroleum	2.51	2.48	2.48	2.45	2.43	2.39	2.38	2.37	2.37	2.35	2.37	2.35	2.34	-1.5%
Natural Gas	56.57	56.79	59.22	60.60	62.27	62.43	62.38	61.77	61.68	61.00	61.81	60.74	58.69	0.9%
Nuclear	30.16	30.16	30.16	30.16	30.16	30.16	30.16	33.31	34.15	37.54	38.41	38.44	42.64	1.3%
Pumped Storage/Other 9/	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0%
Renewable Sources 10/	20.65	20.68	20.67	20.72	20.71	20.72	20.72	20.78	20.81	20.98	21.02	21.06	21.24	1.7%
Total Generation	134.32	134.90	137.69	139.09	140.72	140.85	140.79	143.39	144.17	147.02	148.77	147.74	150.06	1.0%
Sales to Customers	131.15	131.73	134.51	135.90	137.54	137.67	137.61	140.20	140.99	143.84	145.59	144.56	146.88	1.0%
Generation for Own Use	3.17	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	-1.0%
Distributed Generation 5/	0.04	0.05	0.07	0.10	0.10	0.11	0.11	0.12	0.13	0.13	0.13	0.13	0.13	--



Table 68. Electric Power Projections for EMM Region  
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	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.0%
Petroleum	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.0%
Natural Gas	4.54	4.72	4.90	5.08	5.27	5.46	5.66	5.86	6.06	6.27	6.48	6.72	6.95	4.9%
Other Gaseous Fuels	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	--
Renewable Sources 10/	3.22	3.23	3.24	3.25	3.26	3.27	3.29	3.31	3.33	3.35	3.37	3.40	3.44	0.4%
Other	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	-4.3%
Total	8.66	8.86	9.05	9.25	9.44	9.65	9.86	10.07	10.30	10.52	10.76	11.03	11.30	2.4%
Sales to Utilities	1.68	1.72	1.76	1.80	1.84	1.88	1.91	1.95	1.99	2.03	2.06	2.10	2.14	2.4%
Generation for Own Use	6.98	7.14	7.29	7.45	7.61	7.77	7.94	8.12	8.31	8.50	8.70	8.93	9.16	2.4%
<b>Total Electricity Generation</b>	<b>143.03</b>	<b>143.81</b>	<b>146.82</b>	<b>148.43</b>	<b>150.27</b>	<b>150.61</b>	<b>150.77</b>	<b>153.58</b>	<b>154.59</b>	<b>157.67</b>	<b>159.66</b>	<b>158.90</b>	<b>161.49</b>	<b>1.1%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	15.8	15.8	15.7	15.6	15.7	15.8	15.8	15.8	15.9	15.9	16.1	16.2	16.1	0.0%
Commercial	11.7	11.8	11.7	11.6	11.6	11.7	11.8	11.8	12.0	11.9	12.2	12.4	12.2	-0.7%
Industrial	8.6	8.6	8.5	8.4	8.5	8.6	8.7	8.7	8.9	8.9	9.1	9.2	9.2	-1.0%
Transportation	12.3	12.3	12.1	12.0	12.0	12.0	12.1	12.1	12.2	12.2	12.4	12.6	12.5	0.0%
All Sectors Average	12.6	12.7	12.6	12.5	12.5	12.6	12.7	12.7	12.9	12.9	13.1	13.3	13.2	-0.4%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	6.3	6.3	6.2	6.1	6.2	6.3	6.5	6.4	6.6	6.6	6.8	7.0	6.9	-0.8%
Transmission	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.0%
Distribution	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	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	0.4%
Natural Gas	0.43	0.43	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.45	0.46	0.45	0.43	0.7%
Oil	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	-1.6%
Total	0.70	0.71	0.73	0.73	0.74	0.74	0.74	0.74	0.74	0.73	0.74	0.73	0.71	0.5%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	2.88	2.84	2.81	2.77	2.70	2.65	2.60	2.54	2.48	2.48	2.47	2.47	2.47	-0.6%
Natural Gas	6.39	6.40	6.31	6.18	6.29	6.33	6.42	6.51	6.59	6.64	6.85	6.98	7.10	-0.1%
Distillate Fuel Oil	9.34	9.48	9.60	9.70	9.82	10.01	10.25	10.47	10.66	10.88	11.09	11.35	11.58	-0.4%
Residual Fuel Oil	6.62	6.75	6.86	6.97	7.09	7.22	7.35	7.49	7.60	7.70	7.87	8.03	8.19	0.4%
Biomass	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.48	2.48	2.48	2.48	2.48	2.48	1.2%
<b>Emissions 12/</b>														
Total Carbon (million tons)	14.66	14.77	15.13	15.24	15.38	15.35	15.34	15.26	15.24	15.16	15.27	15.13	14.86	0.3%
Carbon Dioxide (million tons)	53.77	54.14	55.47	55.88	56.41	56.30	56.26	55.96	55.90	55.58	56.00	55.46	54.48	0.3%
Sulfur Dioxide (million tons)	0.09	0.09	0.09	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	-1.5%
Nitrogen Oxide (million tons)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	1.3%
Mercury (tons)	0.24	0.18	0.18	0.18	0.19	0.18	0.18	0.18	0.35	0.30	0.31	0.30	0.29	-3.0%

Table 68. Electric Power Projections for EMM Region  
Northeast Power Coordinating Council / New England - 07

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 69. Electric Power Projections for EMM Region  
 Florida Reliability Coordinating Council - 08

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	10.30	10.30	10.30	10.30	10.30	10.30	10.30	10.30	10.52	11.74	12.85	13.92	15.04
Oil and Natural Gas Steam 2/	10.49	10.49	10.49	10.49	10.49	10.49	10.44	10.44	10.44	10.44	10.44	10.44	10.44
Combined Cycle	16.12	16.12	17.26	17.42	18.58	18.58	18.58	18.58	18.58	18.58	18.76	18.97	19.14
Combustion Turbine/Diesel	9.69	10.00	10.48	10.46	10.46	10.46	10.44	10.44	10.44	10.44	10.44	10.44	10.44
Nuclear Power	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.64	0.64	0.70	0.70	0.70	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Distributed Generation 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
Total Capacity	51.03	51.33	53.01	53.15	54.31	54.64	54.57	54.57	54.78	56.01	57.30	58.58	59.87
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	1.14	1.30	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
Combustion Turbine/Diesel	0.00	0.00	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.68	1.83	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	1.44	2.55	3.61	4.73
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.40	0.57
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.54	1.77	3.06	4.34	5.63
Cumulative Total Additions	0.00	0.00	1.68	1.83	2.99	3.32	3.32	3.32	3.53	4.76	6.05	7.33	8.62

Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.00	0.01	0.01	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08
<b>End-Use Sectors 8/</b>													
Coal	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Petroleum	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Natural Gas	0.23	0.25	0.29	0.30	0.35	0.36	0.37	0.39	0.40	0.41	0.42	0.44	0.45
Other Gaseous Fuels	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
Renewable Sources 4/	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.25
Other	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Total	0.85	0.87	0.92	0.93	0.96	0.98	1.00	1.01	1.03	1.04	1.06	1.07	1.09
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	110.90	110.27	114.27	116.02	118.25	120.91	123.15	125.79	124.88	126.50	128.47	130.90	132.80
Commercial/Other	83.55	88.17	91.49	93.22	94.04	95.20	96.95	98.81	100.93	103.29	105.71	108.10	110.38
Industrial	17.47	16.47	16.11	16.90	17.20	17.63	17.97	18.12	18.20	18.20	18.26	18.31	18.32
Transportation	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25
Total Sales	212.15	215.14	222.10	226.37	229.73	233.98	238.31	242.96	244.25	248.24	252.68	257.56	261.75
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	27.71	49.48	44.96	46.71	47.76	44.62	45.26	45.26	44.52	43.78	43.03	42.29	41.20
Gross Interregional Electricity Exports	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
Purchases from Combined Heat and Power 8/	0.42	0.39	0.31	0.33	0.70	0.73	0.77	0.81	0.85	0.87	0.91	0.93	0.98
Electric Power Sector Generation for Custome	209.94	212.29	191.69	194.17	196.26	203.50	207.02	211.52	213.18	217.70	222.69	228.55	234.02
Total Net Energy for Load	238.07	262.16	236.96	241.21	244.71	248.84	253.05	257.58	258.55	262.35	266.63	271.77	276.20
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	60.51	61.57	72.89	72.47	72.71	72.95	73.23	73.37	74.80	82.87	90.65	99.14	108.21
Petroleum	37.01	22.76	12.81	12.98	12.95	13.09	13.38	13.73	13.79	13.66	13.76	14.05	13.88
Natural Gas	80.56	93.34	72.95	75.86	78.05	83.63	86.59	90.46	90.45	87.02	83.70	80.76	77.54
Nuclear	28.76	31.43	30.48	30.34	30.09	30.09	30.09	30.09	30.09	30.09	30.09	30.09	30.09
Pumped Storage/Other 9/	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Renewable Sources 10/	2.82	2.91	2.87	2.83	2.76	4.05	4.04	4.18	4.35	4.38	4.79	4.82	4.61
Total Generation	210.81	213.15	193.15	195.63	197.72	204.95	208.48	212.97	214.64	219.16	224.15	230.01	235.48
Sales to Customers	209.94	212.29	191.69	194.17	196.26	203.50	207.02	211.52	213.18	217.70	222.69	228.55	234.02
Generation for Own Use	0.86	0.86	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46
Distributed Generation 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

Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Petroleum	0.19	0.14	0.14	0.14	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Natural Gas	0.51	0.45	0.52	0.59	1.19	1.28	1.37	1.49	1.59	1.69	1.80	1.89	1.98
Other Gaseous Fuels	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
Renewable Sources 10/	1.38	1.41	1.41	1.42	1.42	1.46	1.49	1.50	1.52	1.53	1.54	1.55	1.59
Other	2.38	2.20	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05
Total	4.65	4.38	4.30	4.38	4.99	5.12	5.25	5.38	5.49	5.60	5.73	5.83	5.96
Sales to Utilities	0.42	0.39	0.31	0.33	0.70	0.73	0.77	0.81	0.85	0.87	0.91	0.93	0.98
Generation for Own Use	4.23	4.00	4.00	4.06	4.29	4.39	4.48	4.57	4.65	4.73	4.82	4.90	4.98
<b>Total Electricity Generation</b>	<b>215.46</b>	<b>217.54</b>	<b>197.46</b>	<b>200.01</b>	<b>202.71</b>	<b>210.08</b>	<b>213.73</b>	<b>218.35</b>	<b>220.14</b>	<b>224.76</b>	<b>229.87</b>	<b>235.84</b>	<b>241.44</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	10.0	11.5	11.3	11.1	11.5	11.8	11.4	11.2	11.1	11.0	10.8	10.8	10.8
Commercial	8.5	10.0	10.0	10.0	10.4	10.6	10.3	10.1	9.9	9.7	9.5	9.4	9.4
Industrial	6.8	7.9	7.6	7.7	8.0	8.1	7.9	7.7	7.6	7.4	7.3	7.3	7.2
Transportation	8.4	9.1	9.0	9.1	9.5	9.7	9.4	9.2	9.0	8.8	8.7	8.7	8.6
All Sectors Average	9.1	10.6	10.5	10.4	10.8	11.0	10.7	10.5	10.4	10.2	10.0	10.0	9.9
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	6.5	8.0	7.9	7.8	8.1	8.3	7.9	7.7	7.5	7.3	7.1	7.1	7.0
Transmission	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Distribution	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	0.62	0.63	0.75	0.75	0.75	0.75	0.75	0.76	0.77	0.84	0.91	0.99	1.08
Natural Gas	0.64	0.75	0.61	0.63	0.65	0.68	0.70	0.73	0.73	0.70	0.68	0.65	0.63
Oil	0.38	0.23	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15
Total	1.64	1.61	1.50	1.52	1.54	1.57	1.60	1.63	1.65	1.69	1.74	1.79	1.85
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	2.67	2.50	2.57	2.62	2.69	2.76	2.64	2.56	2.51	2.47	2.46	2.41	2.39
Natural Gas	8.72	8.24	7.22	7.53	7.83	7.44	7.17	7.23	6.88	6.64	6.47	6.40	6.41
Distillate Fuel Oil	12.29	12.99	14.82	17.05	14.50	13.83	13.13	12.43	11.73	11.45	10.88	10.45	10.46
Residual Fuel Oil	7.18	7.85	8.31	10.08	11.13	10.33	9.78	9.14	8.61	8.36	7.80	7.36	7.35
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.90	1.87
<b>Emissions 12/</b>													
Total Carbon (million tons)	36.30	33.75	34.59	34.81	35.10	35.75	36.26	36.86	37.24	38.91	40.50	42.34	44.36
Carbon Dioxide (million tons)	133.12	123.76	126.83	127.63	128.70	131.07	132.94	135.15	136.56	142.68	148.48	155.23	162.67
Sulfur Dioxide (million tons)	0.37	0.36	0.28	0.28	0.29	0.29	0.28	0.26	0.26	0.21	0.21	0.23	0.15
Nitrogen Oxide (million tons)	0.20	0.18	0.17	0.17	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09
Mercury (tons)	1.28	1.22	1.17	1.02	1.07	1.01	1.11	1.15	1.17	1.06	1.00	1.02	0.76

Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	16.31	17.44	18.59	19.79	19.79	19.79	19.79	19.79	19.79	20.12	21.01	22.10	22.32	3.3%
Oil and Natural Gas Steam 2/	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	0.0%
Combined Cycle	19.14	19.31	19.31	19.31	19.31	19.48	19.59	20.00	20.21	20.99	20.99	20.99	20.99	1.1%
Combustion Turbine/Diesel	10.44	10.44	10.53	10.61	10.66	10.66	10.66	10.66	10.66	10.77	10.77	10.77	10.90	0.4%
Nuclear Power	3.78	3.78	3.78	3.78	5.04	6.15	7.23	8.07	9.19	9.19	9.19	9.70	10.63	4.4%
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	2.0%
Distributed Generation 5/	0.00	0.02	0.08	0.14	0.20	0.27	0.33	0.39	0.45	0.52	0.58	0.64	0.70	--
Total Capacity	61.14	62.46	63.76	65.09	66.47	67.81	69.07	70.38	71.78	73.06	74.02	75.68	77.00	1.7%
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	--
Combustion Turbine/Diesel	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Distributed Generation 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	--
Total Planned Additions	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	6.01	7.14	8.29	9.49	9.49	9.49	9.49	9.49	9.49	9.82	10.71	11.80	12.02	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.57	0.73	0.73	0.73	0.73	0.90	1.02	1.43	1.63	2.41	2.41	2.41	2.41	--
Combustion Turbine/Diesel	0.00	0.00	0.09	0.16	0.22	0.22	0.22	0.22	0.22	0.33	0.33	0.33	0.45	--
Nuclear Power	0.00	0.00	0.00	0.00	1.26	2.37	3.46	4.29	5.42	5.42	5.42	5.93	6.85	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	--
Distributed Generation 5/	0.00	0.02	0.08	0.14	0.20	0.27	0.33	0.39	0.45	0.52	0.58	0.64	0.70	--
Total Unplanned Additions	6.90	8.22	9.51	10.85	12.23	13.57	14.83	16.14	17.53	18.82	19.77	21.44	22.76	--
Cumulative Total Additions	9.89	11.21	12.50	13.84	15.22	16.56	17.82	19.13	20.52	21.81	22.76	24.43	25.75	--

Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	--
<b>End-Use Sectors 8/</b>														
Coal	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.0%
Petroleum	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-0.7%
Natural Gas	0.46	0.47	0.48	0.50	0.51	0.52	0.53	0.54	0.55	0.55	0.56	0.57	0.58	3.6%
Other Gaseous Fuels	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	--
Renewable Sources 4/	0.25	0.27	0.29	0.30	0.30	0.31	0.31	0.31	0.32	0.32	0.33	0.34	0.34	1.8%
Other	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.0%
Total	1.11	1.13	1.17	1.19	1.20	1.22	1.23	1.24	1.26	1.27	1.29	1.30	1.32	1.8%
<b>Electricity Demand</b>														
<b>(billion kilowatthours)</b>														
Residential	134.95	137.05	138.91	140.53	142.71	144.96	147.60	149.74	152.31	154.87	157.73	159.85	162.30	1.6%
Commercial/Other	112.64	114.95	117.28	119.76	122.19	124.60	126.98	129.36	131.74	134.11	136.45	138.81	141.07	2.0%
Industrial	18.31	18.24	18.22	18.21	18.20	18.20	18.22	18.25	18.28	18.32	18.29	18.28	18.29	0.4%
Transportation	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.8%
Total Sales	266.15	270.50	274.67	278.76	283.37	288.03	293.07	297.63	302.61	307.57	312.75	317.21	321.94	1.7%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	39.73	37.01	37.92	35.02	34.41	33.52	32.44	31.47	28.44	27.27	25.68	21.40	19.22	-3.9%
Gross Interregional Electricity Exports	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	--
Purchases from Combined Heat and Power 8/	1.00	1.13	1.30	1.38	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.59	6.1%
Electric Power Sector Generation for Custome	240.10	247.29	250.61	257.74	263.17	268.97	275.35	281.10	289.37	295.76	302.78	311.76	318.90	1.7%
Total Net Energy for Load	280.84	285.43	289.83	294.14	299.00	303.92	309.25	314.05	319.31	324.55	330.01	334.72	339.71	1.1%
<b>Generation by Fuel Type</b>														
<b>(billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	117.93	126.89	135.91	144.77	144.72	144.65	144.65	144.65	144.65	147.17	153.74	162.13	164.10	4.2%
Petroleum	13.81	13.86	13.89	13.86	13.86	13.84	13.83	13.83	13.81	13.83	13.85	13.83	13.86	-2.0%
Natural Gas	73.81	71.99	66.22	64.54	62.56	59.69	57.31	55.90	55.66	57.65	57.93	55.59	54.45	-2.2%
Nuclear	30.09	30.09	30.09	30.09	37.51	46.20	54.96	62.13	70.65	72.64	72.76	75.96	82.64	4.1%
Pumped Storage/Other 9/	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.0%
Renewable Sources 10/	4.77	4.77	4.82	4.78	4.84	4.91	4.91	4.91	4.90	4.78	4.82	4.55	4.15	1.5%
Total Generation	241.57	248.75	252.07	259.20	264.63	270.43	276.81	282.56	290.83	297.22	304.25	313.22	320.36	1.7%
Sales to Customers	240.10	247.29	250.61	257.74	263.17	268.97	275.35	281.10	289.37	295.76	302.78	311.76	318.90	1.7%
Generation for Own Use	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	2.2%
Distributed Generation 5/	0.00	0.01	0.04	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.25	0.28	0.31	--

Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.0%
Petroleum	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.4%
Natural Gas	2.07	2.16	2.24	2.33	2.42	2.50	2.59	2.66	2.73	2.80	2.87	2.94	3.02	8.3%
Other Gaseous Fuels	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	--
Renewable Sources 10/	1.61	1.73	1.90	1.97	2.01	2.01	2.03	2.05	2.07	2.09	2.11	2.13	2.15	1.8%
Other	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05	-0.3%
Total	6.06	6.28	6.53	6.69	6.81	6.90	7.01	7.10	7.19	7.28	7.37	7.46	7.56	2.3%
Sales to Utilities	1.00	1.13	1.30	1.38	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.59	6.1%
Generation for Own Use	5.06	5.14	5.23	5.31	5.39	5.47	5.54	5.61	5.69	5.76	5.83	5.90	5.97	1.7%
<b>Total Electricity Generation</b>	<b>247.63</b>	<b>255.04</b>	<b>258.63</b>	<b>265.96</b>	<b>271.53</b>	<b>277.45</b>	<b>283.96</b>	<b>289.83</b>	<b>298.22</b>	<b>304.72</b>	<b>311.87</b>	<b>320.96</b>	<b>328.23</b>	<b>1.7%</b>
<b>End-Use Prices</b>														
<b>(2006 cents per kilowatthour)</b>														
Residential	10.8	10.8	10.8	10.8	10.9	11.0	11.0	11.0	11.0	11.0	10.9	11.0	11.0	-0.2%
Commercial	9.4	9.4	9.4	9.3	9.4	9.5	9.5	9.5	9.5	9.4	9.4	9.4	9.5	-0.2%
Industrial	7.2	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.2	7.2	7.2	7.2	7.2	-0.4%
Transportation	8.6	8.6	8.6	8.6	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.7	-0.2%
All Sectors Average	10.0	10.0	10.0	9.9	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	-0.2%
<b>Prices by Service Category</b>														
<b>(2006 cents per kilowatthour)</b>														
Generation	7.0	7.0	7.0	6.9	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	-0.5%
Transmission	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.2%
Distribution	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.1%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.16	1.24	1.32	1.40	1.40	1.40	1.40	1.40	1.40	1.42	1.47	1.54	1.55	3.9%
Natural Gas	0.60	0.59	0.55	0.54	0.52	0.50	0.48	0.47	0.47	0.48	0.48	0.46	0.45	-2.1%
Oil	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	-1.9%
Total	1.91	1.98	2.02	2.09	2.07	2.05	2.03	2.02	2.02	2.05	2.10	2.15	2.15	1.2%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	2.32	2.31	2.31	2.32	2.33	2.33	2.33	2.33	2.33	2.33	2.34	2.34	2.35	-0.3%
Natural Gas	6.46	6.51	6.42	6.31	6.44	6.49	6.60	6.73	6.78	6.87	7.09	7.17	7.30	-0.5%
Distillate Fuel Oil	10.60	10.75	10.86	10.96	11.07	11.27	11.50	11.72	11.95	12.13	12.35	12.60	12.83	-0.1%
Residual Fuel Oil	7.46	7.60	7.70	7.80	7.87	8.04	8.23	8.40	8.57	8.60	8.78	8.87	9.04	0.6%
Biomass	1.93	2.06	2.03	2.00	1.97	2.04	2.04	2.04	2.03	1.99	2.00	1.97	1.81	-0.1%
<b>Emissions 12/</b>														
Total Carbon (million tons)	46.43	48.48	50.12	52.16	51.94	51.58	51.30	51.09	51.06	51.87	53.29	54.83	55.15	2.1%
Carbon Dioxide (million tons)	170.24	177.77	183.77	191.27	190.45	189.11	188.08	187.34	187.22	190.19	195.41	201.04	202.22	2.1%
Sulfur Dioxide (million tons)	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	-3.9%
Nitrogen Oxide (million tons)	0.09	0.10	0.10	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	-2.3%
Mercury (tons)	0.77	0.73	0.72	0.79	0.71	0.68	0.67	0.66	0.66	0.66	0.68	0.68	0.66	-2.5%



Table 69. Electric Power Projections for EMM Region  
Florida Reliability Coordinating Council - 08

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	70.76	70.76	71.38	71.38	72.03	71.82	71.56	71.36	71.36	71.66	71.96	72.26	72.56
Oil and Natural Gas Steam 2/	18.45	18.39	18.39	18.39	18.39	18.39	18.39	13.12	13.12	13.12	13.12	13.12	13.12
Combined Cycle	37.01	37.95	38.63	39.85	40.42	40.98	40.98	40.98	40.98	40.98	40.98	40.98	40.98
Combustion Turbine/Diesel	32.13	32.21	32.95	32.86	32.86	32.66	32.36	32.35	32.19	32.19	32.19	32.19	32.19
Nuclear Power	32.55	32.55	32.74	32.74	32.77	32.77	32.99	33.16	33.39	33.56	33.68	33.96	35.03
Pumped Storage/Other 3/	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67
Fuel Cells	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
Renewable Sources 4/	12.57	12.60	12.67	12.71	12.71	12.73	12.73	12.73	12.92	12.92	12.92	12.92	12.92
Distributed Generation 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
Total Capacity	211.14	212.14	214.43	215.61	216.85	217.02	216.69	211.37	211.62	212.09	212.51	213.10	214.46
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.62	0.62	1.27	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.68	1.90	2.47	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Combustion Turbine/Diesel	0.00	0.00	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.12	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Distributed Generation 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
Total Planned Additions	0.00	0.00	2.12	3.38	4.60	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.60	0.90	1.20
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.21	0.21	0.21	0.21	0.21
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.21	0.51	0.81	1.11	2.13
Cumulative Total Additions	0.00	0.00	2.12	3.38	4.60	5.22	5.22	5.22	5.41	5.71	6.01	6.31	7.33

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.26	0.52	0.71	0.71	0.71	0.71	0.71	0.71
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	5.28	5.28	5.28	5.28	5.28
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.01	0.10	0.10	0.29	0.59	0.60	0.76	0.76	0.76	0.76	0.76
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.01	0.10	0.10	0.56	1.11	6.60	6.76	6.76	6.76	6.76	6.76
<b>End-Use Sectors 8/</b>													
Coal	0.68	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Petroleum	0.19	0.23	0.35	0.35	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Natural Gas	4.69	4.50	4.62	4.68	4.74	4.81	4.88	4.96	5.04	5.11	5.19	5.26	5.34
Other Gaseous Fuels	0.22	0.20	0.21	0.21	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Renewable Sources 4/	3.06	3.07	3.08	3.09	3.09	3.21	3.28	3.32	3.35	3.38	3.42	3.47	3.53
Other	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Total	9.11	8.94	9.19	9.25	9.27	9.47	9.60	9.72	9.83	9.93	10.05	10.17	10.31
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	316.99	316.85	324.64	326.30	333.78	340.37	345.41	351.60	348.09	351.51	355.84	361.47	365.58
Commercial/Other	244.21	253.74	260.19	263.47	266.81	270.16	275.04	280.16	285.91	292.35	298.80	305.14	311.12
Industrial	259.56	253.35	251.18	255.00	251.29	257.85	263.05	265.29	266.62	266.72	267.53	268.13	268.17
Transportation	0.52	0.53	0.53	0.54	0.54	0.54	0.55	0.55	0.55	0.55	0.55	0.56	0.56
Total Sales	821.27	824.47	836.54	845.32	852.43	868.92	884.05	897.59	901.17	911.14	922.72	935.30	945.44
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	76.67	66.29	50.18	54.61	70.67	70.88	80.04	89.22	94.94	97.67	97.12	97.42	96.55
Gross Interregional Electricity Exports	56.59	70.53	69.59	70.11	70.15	69.74	67.39	68.19	64.81	64.59	62.27	58.46	55.71
Purchases from Combined Heat and Power 8/	5.84	5.51	6.54	6.66	7.60	8.02	8.19	8.40	8.66	8.84	9.05	9.24	9.61
Electric Power Sector Generation for Custome	851.48	847.42	905.38	909.59	899.93	914.99	917.91	922.21	915.13	921.03	929.75	938.72	947.17
Total Net Energy for Load	877.40	848.69	892.50	900.75	908.05	924.15	938.76	951.64	953.93	962.96	973.66	986.92	997.62
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	457.27	461.70	465.30	462.87	468.64	471.68	473.62	473.12	473.69	476.76	480.20	482.96	486.38
Petroleum	9.81	3.55	5.69	5.63	5.73	5.75	5.16	5.36	5.36	5.44	5.46	5.42	5.47
Natural Gas	101.65	109.85	149.95	154.24	139.62	151.38	151.19	153.84	142.78	143.21	146.52	148.85	146.72
Nuclear	251.51	249.34	258.38	260.27	258.34	258.40	260.23	261.79	263.64	264.99	265.96	267.96	274.23
Pumped Storage/Other 9/	-1.07	-1.36	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35
Renewable Sources 10/	36.67	29.17	36.66	37.20	38.20	38.39	38.33	38.69	40.27	41.24	42.22	44.14	44.98
Total Generation	855.83	852.25	913.64	917.85	908.19	923.25	926.18	930.45	923.38	929.27	938.01	946.98	955.43
Sales to Customers	851.48	847.42	905.38	909.59	899.93	914.99	917.91	922.21	915.13	921.03	929.75	938.72	947.17
Generation for Own Use	4.36	4.83	8.26	8.26	8.26	8.26	8.27	8.24	8.24	8.25	8.25	8.25	8.26
Distributed Generation 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

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	3.39	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29
Petroleum	1.87	1.41	1.54	1.54	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88
Natural Gas	22.31	22.42	22.77	23.22	24.62	25.17	25.73	26.35	26.93	27.51	28.11	28.67	29.22
Other Gaseous Fuels	2.23	1.81	1.71	1.71	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
Renewable Sources 10/	18.24	18.34	18.42	18.45	18.46	19.23	19.60	19.80	20.02	20.20	20.45	20.72	21.17
Other	1.24	1.76	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Total	49.27	49.02	49.43	49.92	51.89	53.21	54.13	54.97	55.77	56.52	57.37	58.20	59.19
Sales to Utilities	5.84	5.51	6.54	6.66	7.60	8.02	8.19	8.40	8.66	8.84	9.05	9.24	9.61
Generation for Own Use	43.43	43.51	42.89	43.26	44.28	45.19	45.94	46.56	47.10	47.67	48.31	48.96	49.58
<b>Total Electricity Generation</b>	<b>905.10</b>	<b>901.27</b>	<b>963.07</b>	<b>967.77</b>	<b>960.07</b>	<b>976.46</b>	<b>980.32</b>	<b>985.41</b>	<b>979.14</b>	<b>985.79</b>	<b>995.37</b>	<b>1005.17</b>	<b>1014.62</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	8.7	8.9	8.6	8.6	9.0	9.0	8.8	8.6	8.6	8.4	8.3	8.3	8.3
Commercial	7.5	7.7	7.6	7.7	8.0	8.0	7.8	7.7	7.5	7.4	7.3	7.3	7.3
Industrial	5.2	5.3	5.3	5.5	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.1
Transportation	6.9	7.0	6.7	7.0	7.3	7.3	7.1	7.0	6.9	6.8	6.7	6.7	6.7
All Sectors Average	7.2	7.4	7.3	7.4	7.7	7.7	7.5	7.4	7.3	7.2	7.1	7.1	7.1
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	5.2	5.5	5.3	5.4	5.7	5.6	5.5	5.3	5.2	5.1	5.0	5.0	5.0
Transmission	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Distribution	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	4.63	4.67	4.75	4.73	4.78	4.81	4.83	4.83	4.84	4.87	4.90	4.93	4.96
Natural Gas	0.94	0.98	1.27	1.29	1.17	1.24	1.23	1.25	1.17	1.17	1.20	1.22	1.20
Oil	0.11	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Total	5.68	5.69	6.08	6.08	6.01	6.11	6.12	6.14	6.06	6.10	6.16	6.20	6.22
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	2.20	2.08	2.10	2.15	2.20	2.22	2.17	2.12	2.09	2.06	2.04	2.02	2.01
Natural Gas	8.67	6.79	6.77	7.17	7.40	6.97	6.65	6.46	6.24	6.05	5.92	5.87	5.93
Distillate Fuel Oil	12.39	13.09	14.92	17.18	14.39	13.72	12.98	12.24	11.55	11.28	10.69	10.26	10.27
Residual Fuel Oil	6.84	7.82	8.29	10.05	11.10	10.30	9.75	9.06	8.54	8.30	7.74	7.30	7.29
Biomass	1.87	1.87	1.87	1.87	1.87	1.89	1.88	1.89	1.89	1.90	2.00	2.07	2.06
<b>Emissions 12/</b>													
Total Carbon (million tons)	152.77	153.61	157.56	157.23	156.90	158.96	159.38	159.75	158.58	159.56	160.91	161.93	162.68
Carbon Dioxide (million tons)	560.16	563.24	577.70	576.49	575.29	582.86	584.39	585.76	581.47	585.06	590.00	593.73	596.48
Sulfur Dioxide (million tons)	2.74	2.54	2.44	2.20	2.01	1.89	1.74	1.49	1.41	1.35	1.29	1.22	1.16
Nitrogen Oxide (million tons)	0.81	0.78	0.85	0.84	0.44	0.44	0.44	0.44	0.43	0.44	0.39	0.38	0.36
Mercury (tons)	10.39	10.33	9.64	9.13	8.66	7.75	7.33	6.39	6.41	5.54	5.38	5.02	4.97

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	72.56	72.95	72.95	75.59	77.78	80.16	82.13	84.05	85.75	87.82	89.63	91.38	92.65	1.1%
Oil and Natural Gas Steam 2/	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.04	-1.4%
Combined Cycle	40.98	40.98	40.98	40.98	41.13	41.13	41.13	41.13	41.13	41.13	41.30	41.50	41.71	0.4%
Combustion Turbine/Diesel	32.19	32.19	32.19	32.38	32.91	34.00	35.46	36.92	38.71	40.08	41.51	42.90	44.85	1.4%
Nuclear Power	37.03	39.43	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	41.60	1.0%
Pumped Storage/Other 3/	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	0.0%
Fuel Cells	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	--
Renewable Sources 4/	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.95	0.1%
Distributed Generation 5/	0.00	0.00	0.00	0.06	0.12	0.18	0.24	0.31	0.37	0.44	0.50	0.56	0.62	--
<b>Total Capacity</b>	<b>216.46</b>	<b>219.25</b>	<b>222.13</b>	<b>225.01</b>	<b>227.96</b>	<b>231.48</b>	<b>234.97</b>	<b>238.42</b>	<b>241.98</b>	<b>245.48</b>	<b>248.95</b>	<b>252.35</b>	<b>255.08</b>	<b>0.8%</b>
<b>Cumulative Planned Additions 6/</b>														
Coal	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	--
Oil and Natural Gas Steam 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	--
Combined Cycle	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	--
Combustion Turbine/Diesel	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	--
Distributed Generation 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	--
<b>Total Planned Additions</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>5.20</b>	<b>--</b>
<b>Cumulative Unplanned Additions 6/</b>														
Coal	1.20	1.59	1.59	4.23	6.42	8.80	10.77	12.69	14.40	16.46	18.27	20.02	21.29	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15	0.32	0.52	0.73	--
Combustion Turbine/Diesel	0.00	0.00	0.00	0.18	0.72	1.80	3.26	4.73	6.52	7.89	9.32	10.71	12.65	--
Nuclear Power	2.72	5.12	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.24	--
Distributed Generation 5/	0.00	0.00	0.00	0.06	0.12	0.18	0.24	0.31	0.37	0.44	0.50	0.56	0.62	--
<b>Total Unplanned Additions</b>	<b>4.13</b>	<b>6.92</b>	<b>9.80</b>	<b>12.68</b>	<b>15.63</b>	<b>19.15</b>	<b>22.64</b>	<b>26.09</b>	<b>29.65</b>	<b>33.15</b>	<b>36.61</b>	<b>40.02</b>	<b>43.53</b>	<b>--</b>
<b>Cumulative Total Additions</b>	<b>9.33</b>	<b>12.12</b>	<b>15.00</b>	<b>17.88</b>	<b>20.83</b>	<b>24.35</b>	<b>27.84</b>	<b>31.29</b>	<b>34.85</b>	<b>38.35</b>	<b>41.81</b>	<b>45.22</b>	<b>48.73</b>	<b>--</b>

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.72	0.71	0.72	0.71	--
Oil and Natural Gas Steam 3/	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.35	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	7.54	--
<b>End-Use Sectors 8/</b>														
Coal	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.0%
Petroleum	0.27	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.27	0.26	0.27	0.27	0.27	0.5%
Natural Gas	5.41	5.48	5.54	5.61	5.67	5.73	5.78	5.83	5.89	5.94	5.99	6.04	6.10	1.3%
Other Gaseous Fuels	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	0.8%
Renewable Sources 4/	3.59	3.74	3.98	4.29	4.50	4.53	4.59	4.66	4.72	4.79	4.86	4.92	4.98	2.0%
Other	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.0%
Total	10.44	10.65	10.96	11.34	11.61	11.69	11.81	11.93	12.05	12.17	12.29	12.40	12.52	1.4%
<b>Electricity Demand</b> (billion kilowatthours)														
Residential	370.52	375.22	379.34	382.83	387.82	393.05	399.33	404.18	410.14	416.12	422.82	427.57	433.29	1.3%
Commercial/Other	317.13	323.16	329.24	335.68	341.99	348.31	354.61	360.94	367.21	373.50	379.70	385.96	392.11	1.8%
Industrial	268.04	267.10	266.72	266.38	266.32	266.21	266.48	266.92	267.51	267.98	267.74	267.58	267.92	0.2%
Transportation	0.57	0.57	0.58	0.58	0.59	0.61	0.62	0.62	0.63	0.63	0.63	0.64	0.65	0.8%
Total Sales	956.25	966.05	975.88	985.47	996.71	1008.18	1021.04	1032.66	1045.48	1058.23	1070.90	1081.75	1093.97	1.2%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	94.35	89.12	85.76	87.34	83.38	79.20	78.62	75.64	72.50	65.48	66.21	62.16	62.30	-0.3%
Gross Interregional Electricity Exports	50.41	45.30	46.19	43.09	42.00	43.19	44.01	43.29	41.57	36.10	35.39	26.68	25.08	-4.2%
Purchases from Combined Heat and Power 8/	9.80	10.73	12.49	14.82	16.31	16.15	16.33	16.49	16.65	16.80	16.96	17.11	17.26	4.9%
Electric Power Sector Generation for Custome	955.30	964.82	977.69	980.79	994.02	1011.68	1026.47	1040.82	1055.61	1070.43	1082.23	1088.86	1099.88	1.1%
Total Net Energy for Load	1009.04	1019.36	1029.75	1039.87	1051.72	1063.83	1077.40	1089.66	1103.19	1116.62	1130.00	1141.46	1154.36	1.3%
<b>Generation by Fuel Type</b> (billion kilowatthours)														
<b>Electric Power Sector</b>														
Coal	486.67	490.23	491.75	510.06	524.42	541.80	556.84	572.11	583.89	598.35	609.77	619.06	628.85	1.3%
Petroleum	5.34	5.43	5.50	5.76	5.92	6.00	6.03	6.03	6.04	6.37	6.57	6.63	6.65	2.7%
Natural Gas	140.29	127.38	117.44	96.16	93.72	93.62	93.37	92.59	95.52	95.36	95.33	92.50	95.43	-0.6%
Nuclear	286.69	304.13	325.85	331.85	333.21	333.21	333.21	333.21	333.21	333.21	333.21	333.21	331.29	1.2%
Pumped Storage/Other 9/	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	2.3%
Renewable Sources 10/	46.93	48.27	47.77	47.59	47.38	47.67	47.65	47.50	47.59	47.76	47.97	48.08	48.29	2.1%
Total Generation	963.56	973.08	985.97	989.07	1002.29	1019.95	1034.74	1049.09	1063.89	1078.71	1090.50	1097.14	1108.15	1.1%
Sales to Customers	955.30	964.82	977.69	980.79	994.02	1011.68	1026.47	1040.82	1055.61	1070.43	1082.23	1088.86	1099.88	1.1%
Generation for Own Use	8.26	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	2.3%
Distributed Generation 5/	0.00	0.00	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24	0.27	--

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	0.0%
Petroleum	1.88	1.88	1.88	1.91	1.91	1.91	1.91	1.91	1.89	1.91	1.89	1.89	1.89	1.2%
Natural Gas	29.74	30.26	30.77	31.28	31.77	32.22	32.65	33.05	33.45	33.84	34.23	34.63	35.05	1.9%
Other Gaseous Fuels	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	0.3%
Renewable Sources 10/	21.50	22.59	24.53	27.04	28.70	28.72	29.07	29.43	29.78	30.13	30.45	30.74	31.06	2.2%
Other	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	-0.1%
Total	60.05	61.66	64.11	67.15	69.31	69.77	70.57	71.33	72.04	72.81	73.49	74.19	74.92	1.8%
Sales to Utilities	9.80	10.73	12.49	14.82	16.31	16.15	16.33	16.49	16.65	16.80	16.96	17.11	17.26	4.9%
Generation for Own Use	50.25	50.93	51.62	52.33	53.00	53.63	54.24	54.84	55.39	56.01	56.54	57.08	57.65	1.2%
<b>Total Electricity Generation</b>	<b>1023.61</b>	<b>1034.75</b>	<b>1050.07</b>	<b>1056.25</b>	<b>1071.65</b>	<b>1089.80</b>	<b>1105.42</b>	<b>1120.55</b>	<b>1136.09</b>	<b>1151.71</b>	<b>1164.21</b>	<b>1171.57</b>	<b>1183.34</b>	<b>1.1%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	8.4	8.4	8.4	8.4	8.4	8.3	8.3	8.4	8.4	8.4	8.4	8.5	8.5	-0.2%
Commercial	7.3	7.3	7.3	7.3	7.3	7.2	7.3	7.3	7.3	7.3	7.3	7.4	7.4	-0.2%
Industrial	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.2	5.2	-0.1%
Transportation	6.8	6.8	6.8	6.8	6.7	6.5	6.6	6.6	6.6	6.6	6.7	6.7	6.8	-0.2%
All Sectors Average	7.1	7.2	7.2	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.2	7.3	7.3	-0.1%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.2	5.2	-0.2%
Transmission	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.9%
Distribution	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	-0.3%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	4.97	5.00	5.02	5.18	5.30	5.44	5.56	5.68	5.76	5.87	5.95	6.00	6.08	1.1%
Natural Gas	1.15	1.05	0.98	0.82	0.80	0.80	0.80	0.80	0.82	0.82	0.82	0.80	0.82	-0.8%
Oil	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	2.2%
Total	6.18	6.11	6.06	6.06	6.17	6.31	6.43	6.54	6.65	6.76	6.84	6.87	6.97	0.8%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.97	1.96	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.95	1.96	1.97	-0.2%
Natural Gas	6.01	6.07	6.05	5.99	6.11	6.20	6.33	6.43	6.50	6.56	6.81	6.94	7.07	0.2%
Distillate Fuel Oil	10.42	10.57	10.68	10.78	10.90	11.10	11.33	11.55	11.78	11.97	12.19	12.44	12.64	-0.1%
Residual Fuel Oil	7.41	7.56	7.67	7.77	7.83	8.01	8.20	8.37	8.54	8.57	8.75	8.84	9.01	0.6%
Biomass	2.09	2.14	2.09	2.07	2.07	2.07	2.05	2.18	2.17	2.18	2.18	2.17	2.14	0.6%
<b>Emissions 12/</b>														
Total Carbon (million tons)	162.13	161.55	160.85	162.89	166.12	170.17	173.56	176.83	179.56	182.62	184.74	185.90	188.30	0.9%
Carbon Dioxide (million tons)	594.47	592.36	589.77	597.27	609.11	623.96	636.38	648.37	658.40	669.60	677.38	681.61	690.44	0.9%
Sulfur Dioxide (million tons)	0.99	0.96	0.91	0.90	0.90	0.89	0.89	0.90	0.90	0.87	0.86	0.86	0.92	-4.2%
Nitrogen Oxide (million tons)	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37	0.36	0.36	0.35	0.35	0.34	-3.4%
Mercury (tons)	4.36	3.85	3.62	3.74	3.56	3.45	3.41	3.42	3.32	3.25	3.14	3.10	3.14	-4.8%

Table 70. Electric Power Projections for EMM Region  
Southeastern Electric Reliability Council - 09

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.



Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	21.47	21.47	21.47	21.47	21.47	22.09	22.09	22.09	22.09	22.09	22.09	22.09	22.09
Oil and Natural Gas Steam 2/	12.99	12.99	12.96	12.96	12.96	12.94	12.94	9.90	9.90	9.90	9.90	9.90	9.90
Combined Cycle	9.93	9.93	9.93	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46
Combustion Turbine/Diesel	7.43	7.43	7.51	7.51	7.51	7.51	7.51	6.03	6.03	6.03	6.03	6.03	6.03
Nuclear Power	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Pumped Storage/Other 3/	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Fuel Cells	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
Renewable Sources 4/	3.51	3.85	4.12	4.27	4.27	4.27	4.28	4.28	4.28	4.28	4.28	4.28	4.29
Distributed Generation 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
Total Capacity	57.01	57.35	57.66	58.34	58.34	58.95	58.95	54.43	54.43	54.44	54.44	54.44	54.44
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Combustion Turbine/Diesel	0.00	0.00	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.30	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47
Distributed Generation 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
Total Planned Additions	0.00	0.00	0.64	1.31	1.32	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.95
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	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
Distributed Generation 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
Total Unplanned Additions	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
Cumulative Total Additions	0.00	0.00	0.64	1.31	1.32	1.94	1.95	1.95	1.95	1.95	1.95	1.95	1.96

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	0.00	0.00	0.03	0.03	0.03	0.05	0.05	3.09	3.09	3.09	3.09	3.09	3.09
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.30	0.30	0.30	0.30	0.30	1.78	1.78	1.78	1.78	1.78	1.78
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.33	0.33	0.33	0.35	0.35	4.87	4.87	4.87	4.87	4.87	4.87
<b>End-Use Sectors 8/</b>													
Coal	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Petroleum	0.05	0.04	0.06	0.06	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Natural Gas	0.84	0.80	0.80	0.80	0.79	0.80	0.80	0.80	0.81	0.81	0.81	0.82	0.82
Other Gaseous Fuels	0.06	0.06	0.06	0.06	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Renewable Sources 4/	0.33	0.34	0.35	0.35	0.35	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.42
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	1.38	1.33	1.37	1.37	1.43	1.45	1.46	1.47	1.48	1.49	1.50	1.51	1.53
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	67.26	68.47	67.41	68.08	69.24	70.35	71.04	71.92	70.71	71.00	71.49	72.27	72.76
Commercial/Other	69.47	71.54	71.50	72.30	73.07	74.01	75.32	76.67	78.12	79.73	81.32	82.86	84.29
Industrial	50.06	50.95	50.57	50.13	49.05	50.54	51.63	52.01	52.22	52.33	52.59	52.69	52.74
Transportation	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
Total Sales	186.83	191.00	189.52	190.55	191.40	194.93	198.05	200.65	201.09	203.12	205.44	207.87	209.84
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	16.00	18.39	16.81	19.82	18.28	18.14	17.71	18.60	19.05	21.41	19.13	19.61	20.32
Gross Interregional Electricity Exports	15.06	19.90	14.09	12.07	13.29	13.30	12.36	11.24	10.13	9.89	8.82	9.04	7.60
Purchases from Combined Heat and Power 8/	0.92	0.90	1.16	1.17	1.28	1.30	1.33	1.34	1.35	1.36	1.38	1.39	1.41
Electric Power Sector Generation for Custome	214.02	211.92	200.78	196.56	200.05	203.58	206.01	206.37	204.88	204.03	207.29	209.61	209.54
Total Net Energy for Load	215.89	211.30	204.67	205.47	206.31	209.73	212.68	215.08	215.15	216.91	218.98	221.57	223.67
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	142.56	140.01	140.55	139.35	139.53	142.11	144.21	145.34	145.78	146.21	146.65	147.10	147.51
Petroleum	1.60	0.24	2.02	1.01	1.12	1.15	1.17	1.22	1.22	1.22	1.22	1.20	1.20
Natural Gas	52.88	56.17	39.52	36.98	39.81	40.70	41.00	40.19	38.25	36.96	39.79	41.67	41.17
Nuclear	8.82	9.35	9.37	9.32	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28
Pumped Storage/Other 9/	0.29	0.05	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04
Renewable Sources 10/	8.20	6.45	9.68	10.26	10.67	10.69	10.70	10.70	10.71	10.71	10.71	10.72	10.72
Total Generation	214.36	212.26	201.10	196.88	200.37	203.90	206.32	206.69	205.20	204.35	207.61	209.92	209.86
Sales to Customers	214.02	211.92	200.78	196.56	200.05	203.58	206.01	206.37	204.88	204.03	207.29	209.61	209.54
Generation for Own Use	0.33	0.34	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Distributed Generation 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

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.59	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Petroleum	0.10	0.09	0.22	0.22	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Natural Gas	4.27	4.32	4.33	4.35	4.38	4.40	4.43	4.46	4.49	4.51	4.54	4.57	4.60
Other Gaseous Fuels	1.18	0.94	0.89	0.89	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Renewable Sources 10/	2.28	2.34	2.39	2.40	2.40	2.51	2.58	2.62	2.64	2.67	2.71	2.76	2.81
Other	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total	8.48	8.38	8.51	8.54	8.92	9.06	9.16	9.22	9.27	9.33	9.40	9.48	9.55
Sales to Utilities	0.92	0.90	1.16	1.17	1.28	1.30	1.33	1.34	1.35	1.36	1.38	1.39	1.41
Generation for Own Use	7.56	7.49	7.35	7.38	7.65	7.75	7.83	7.88	7.92	7.97	8.02	8.08	8.14
<b>Total Electricity Generation</b>	<b>222.84</b>	<b>220.64</b>	<b>209.62</b>	<b>205.42</b>	<b>209.29</b>	<b>212.96</b>	<b>215.48</b>	<b>215.91</b>	<b>214.47</b>	<b>213.68</b>	<b>217.01</b>	<b>219.40</b>	<b>219.41</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	8.2	8.5	8.6	8.7	9.1	9.2	9.1	8.8	8.8	8.7	8.6	8.6	8.7
Commercial	7.1	7.2	7.6	7.8	8.2	8.3	8.2	7.9	7.8	7.7	7.6	7.6	7.7
Industrial	5.4	5.6	5.9	6.1	6.3	6.3	6.3	6.0	5.9	5.8	5.8	5.8	5.8
Transportation	6.3	6.4	6.5	6.8	7.0	7.2	7.1	7.0	6.9	6.8	6.8	6.9	6.9
All Sectors Average	7.0	7.2	7.5	7.7	8.0	8.1	8.0	7.7	7.6	7.6	7.5	7.5	7.6
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	4.6	4.8	5.1	5.3	5.6	5.7	5.6	5.3	5.2	5.2	5.1	5.1	5.2
Transmission	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Distribution	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.53	1.49	1.52	1.50	1.51	1.53	1.55	1.56	1.57	1.57	1.58	1.58	1.59
Natural Gas	0.49	0.52	0.37	0.35	0.37	0.38	0.38	0.37	0.35	0.35	0.37	0.38	0.38
Oil	0.02	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	2.03	2.01	1.91	1.87	1.89	1.92	1.94	1.94	1.94	1.93	1.96	1.98	1.98
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.23	1.27	1.32	1.35	1.39	1.44	1.45	1.45	1.44	1.44	1.44	1.43	1.43
Natural Gas	8.29	6.48	6.75	7.13	7.31	6.85	6.52	6.33	6.13	5.94	5.81	5.77	5.83
Distillate Fuel Oil	12.47	13.18	14.83	17.31	13.62	12.97	12.32	11.58	10.89	10.61	10.02	9.60	9.61
Residual Fuel Oil	7.44	6.26	6.63	9.53	10.81	10.00	9.46	8.18	7.79	7.64	7.18	6.88	6.86
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.88
<b>Emissions 12/</b>													
Total Carbon (million tons)	52.09	51.68	50.98	50.02	50.44	51.23	51.82	52.02	51.96	51.93	52.48	52.89	52.99
Carbon Dioxide (million tons)	190.98	189.48	186.91	183.39	184.95	187.83	190.02	190.74	190.53	190.40	192.43	193.92	194.31
Sulfur Dioxide (million tons)	0.43	0.40	0.46	0.43	0.45	0.42	0.39	0.37	0.36	0.34	0.28	0.28	0.27
Nitrogen Oxide (million tons)	0.29	0.27	0.28	0.27	0.24	0.24	0.25	0.24	0.24	0.24	0.21	0.22	0.22
Mercury (tons)	4.16	4.10	4.43	4.16	4.24	3.80	3.85	3.54	3.59	2.82	2.65	2.60	2.61

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	22.55	23.22	23.93	24.51	25.09	25.73	26.31	26.87	27.37	27.74	28.28	28.28	28.36	1.2%
Oil and Natural Gas Steam 2/	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	-1.1%
Combined Cycle	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	0.2%
Combustion Turbine/Diesel	6.03	6.03	6.03	6.03	6.07	6.17	6.27	6.35	6.53	6.86	7.01	7.66	8.27	0.4%
Nuclear Power	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	0.0%
Pumped Storage/Other 3/	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.0%
Fuel Cells	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	--
Renewable Sources 4/	4.29	4.29	4.29	4.30	4.30	4.30	4.30	4.31	4.31	4.31	4.31	4.32	4.32	0.5%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	--
Total Capacity	54.91	55.57	56.29	56.87	57.51	58.26	58.95	59.62	60.31	61.02	61.72	62.38	63.09	0.4%
<b>Cumulative Planned Additions 6/</b>														
Coal	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	--
Combustion Turbine/Diesel	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.47	0.47	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.50	0.50	0.50	--
Distributed Generation 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	--
Total Planned Additions	1.96	1.96	1.96	1.96	1.97	1.97	1.97	1.97	1.98	1.98	1.98	1.98	1.99	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	0.46	1.13	1.84	2.42	3.00	3.64	4.21	4.78	5.28	5.65	6.18	6.18	6.27	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.04	0.14	0.24	0.32	0.50	0.83	0.98	1.63	2.24	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	--
Total Unplanned Additions	0.46	1.13	1.84	2.42	3.05	3.81	4.49	5.16	5.85	6.56	7.25	7.91	8.62	--
Cumulative Total Additions	2.42	3.09	3.80	4.39	5.02	5.78	6.46	7.13	7.82	8.54	9.24	9.90	10.61	--

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	--
Combined Cycle	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	--
Combustion Turbine/Diesel	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	4.87	--
<b>End-Use Sectors 8/</b>														
Coal	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.0%
Petroleum	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	3.5%
Natural Gas	0.82	0.83	0.83	0.84	0.84	0.84	0.84	0.85	0.85	0.85	0.86	0.86	0.86	0.3%
Other Gaseous Fuels	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	1.7%
Renewable Sources 4/	0.43	0.44	0.49	0.61	0.65	0.65	0.66	0.68	0.69	0.70	0.72	0.73	0.74	3.3%
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Total	1.54	1.55	1.61	1.73	1.77	1.78	1.79	1.81	1.83	1.84	1.86	1.87	1.89	1.5%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	73.51	74.16	74.72	75.14	75.87	76.67	77.69	78.43	79.37	80.35	81.44	82.18	83.16	0.8%
Commercial/Other	85.87	87.36	88.89	90.45	91.97	93.53	95.11	96.71	98.26	99.87	101.41	103.04	104.71	1.6%
Industrial	52.78	52.61	52.44	52.36	52.30	52.18	52.14	52.11	52.20	52.22	52.17	52.08	52.12	0.1%
Transportation	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1.3%
Total Sales	212.21	214.18	216.10	218.00	220.18	222.44	225.01	227.31	229.89	232.51	235.08	237.36	240.06	1.0%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	19.04	18.47	15.92	14.87	15.97	15.21	13.82	13.26	12.33	12.04	11.51	12.16	12.80	-1.5%
Gross Interregional Electricity Exports	6.64	6.41	5.30	5.54	6.59	7.75	7.84	8.87	9.01	8.72	8.47	8.03	7.35	-4.1%
Purchases from Combined Heat and Power 8/	1.43	1.45	1.80	2.79	3.02	2.94	2.96	2.98	2.99	3.01	3.03	3.04	3.06	5.2%
Electric Power Sector Generation for Custome	212.38	214.79	217.93	220.26	222.31	226.70	230.90	234.93	238.74	241.50	244.51	245.84	247.37	0.6%
Total Net Energy for Load	226.20	228.29	230.34	232.38	234.70	237.10	239.84	242.30	245.05	247.83	250.57	253.01	255.88	0.8%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	151.19	155.96	161.68	165.96	170.25	174.93	179.20	183.39	187.04	189.76	193.73	193.77	194.80	1.4%
Petroleum	1.22	1.27	1.35	1.41	1.49	1.58	1.63	1.67	1.70	1.73	1.78	1.78	1.77	8.7%
Natural Gas	40.30	37.32	34.63	32.63	30.35	29.98	29.91	29.70	29.81	29.83	28.84	30.16	31.08	-2.4%
Nuclear	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	0.0%
Pumped Storage/Other 9/	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	--
Renewable Sources 10/	10.74	11.31	11.34	11.34	11.29	11.28	11.24	11.25	11.25	11.26	11.23	11.20	10.80	2.2%
Total Generation	212.69	215.11	218.24	220.58	222.62	227.02	231.22	235.25	239.05	241.82	244.83	246.16	247.69	0.6%
Sales to Customers	212.38	214.79	217.93	220.26	222.31	226.70	230.90	234.93	238.74	241.50	244.51	245.84	247.37	0.6%
Generation for Own Use	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	-0.3%
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	--

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.0%
Petroleum	0.44	0.44	0.44	0.47	0.47	0.47	0.47	0.47	0.44	0.47	0.44	0.44	0.44	6.9%
Natural Gas	4.63	4.65	4.68	4.71	4.73	4.76	4.78	4.80	4.83	4.85	4.88	4.90	4.93	0.5%
Other Gaseous Fuels	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	0.3%
Renewable Sources 10/	2.87	2.93	3.33	4.37	4.64	4.61	4.67	4.74	4.80	4.87	4.93	4.98	5.04	3.2%
Other	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.0%
Total	9.64	9.73	10.15	11.25	11.55	11.54	11.63	11.72	11.78	11.89	11.95	12.03	12.11	1.5%
Sales to Utilities	1.43	1.45	1.80	2.79	3.02	2.94	2.96	2.98	2.99	3.01	3.03	3.04	3.06	5.2%
Generation for Own Use	8.21	8.28	8.35	8.45	8.53	8.60	8.67	8.74	8.78	8.88	8.92	8.99	9.06	0.8%
<b>Total Electricity Generation</b>	<b>222.33</b>	<b>224.83</b>	<b>228.39</b>	<b>231.82</b>	<b>234.18</b>	<b>238.57</b>	<b>242.86</b>	<b>246.98</b>	<b>250.86</b>	<b>253.74</b>	<b>256.81</b>	<b>258.23</b>	<b>259.85</b>	<b>0.7%</b>
<b>End-Use Prices</b>														
<b>(2006 cents per kilowatthour)</b>														
Residential	8.7	8.7	8.7	8.6	8.6	8.6	8.7	8.6	8.6	8.6	8.6	8.6	8.6	0.1%
Commercial	7.7	7.7	7.6	7.5	7.5	7.5	7.6	7.6	7.5	7.5	7.5	7.6	7.6	0.2%
Industrial	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.7	5.8	5.8	5.8	0.1%
Transportation	7.0	7.0	7.0	6.9	6.9	6.5	6.6	6.6	6.7	6.7	6.7	6.8	6.8	0.3%
All Sectors Average	7.6	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.6	0.2%
<b>Prices by Service Category</b>														
<b>(2006 cents per kilowatthour)</b>														
Generation	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.3	5.3	0.5%
Transmission	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.2%
Distribution	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	-0.9%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.62	1.67	1.72	1.76	1.80	1.84	1.87	1.91	1.94	1.97	2.00	2.00	2.01	1.3%
Natural Gas	0.37	0.35	0.33	0.31	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	-2.2%
Oil	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	7.9%
Total	2.01	2.03	2.06	2.09	2.11	2.15	2.18	2.22	2.25	2.28	2.30	2.31	2.33	0.6%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.45	1.46	1.47	1.46	1.47	1.47	1.48	1.48	1.49	1.50	1.51	1.52	1.53	0.8%
Natural Gas	5.90	5.97	5.90	5.80	5.92	6.03	6.16	6.27	6.35	6.43	6.68	6.82	6.96	0.3%
Distillate Fuel Oil	9.75	9.91	10.03	10.15	10.29	10.50	10.73	10.95	11.19	11.38	11.60	11.85	12.03	-0.4%
Residual Fuel Oil	6.99	7.27	7.50	7.62	7.70	7.90	8.09	8.26	8.44	8.47	8.65	8.73	8.92	1.5%
Biomass	1.90	1.96	1.87	1.86	1.85	1.84	1.79	1.80	1.78	1.80	1.79	1.70	1.58	-0.7%
<b>Emissions 12/</b>														
Total Carbon (million tons)	53.91	54.83	56.07	57.00	57.89	59.13	60.26	61.33	62.31	63.03	63.98	64.15	64.53	0.9%
Carbon Dioxide (million tons)	197.67	201.04	205.58	209.01	212.25	216.81	220.94	224.89	228.48	231.13	234.59	235.21	236.59	0.9%
Sulfur Dioxide (million tons)	0.25	0.24	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	-2.0%
Nitrogen Oxide (million tons)	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.24	-0.6%
Mercury (tons)	2.49	2.48	2.43	2.28	2.05	1.68	1.64	1.65	1.63	1.64	1.64	1.62	1.58	-3.9%

Table 71. Electric Power Projections for EMM Region  
Southwest Power Pool - 10

- 1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.
- 2/ Includes oil-, gas-, and dual-fired capacity.
- 3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.
- 4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 5/ Primarily peak-load capacity fueled by natural gas.
- 6/ Cumulative additions after December 31, 2006.
- 7/ Generation to meet system load by source.
- 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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.
- 10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.
- 11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.
- 12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).
- O&M = Operation and maintenance.  
EMM = Electricity market module.  
- - = Not applicable.
- Note: Totals may not equal sum of components due to independent rounding.
- Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 72. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	11.28	11.39	11.39	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59
Oil and Natural Gas Steam 2/	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.76	0.76	0.76	0.76	0.76	0.76
Combined Cycle	5.22	5.47	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13
Combustion Turbine/Diesel	2.08	2.14	2.13	2.13	2.13	2.13	2.13	1.76	1.76	1.76	1.76	1.76	1.76
Nuclear Power	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Pumped Storage/Other 3/	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Fuel Cells	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
Renewable Sources 4/	35.73	36.42	37.02	38.31	38.31	38.32	38.32	38.33	38.46	38.47	38.47	38.48	38.52
Distributed Generation 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
Total Capacity	56.53	57.63	58.88	60.38	60.38	60.38	60.39	60.01	60.14	60.15	60.16	60.16	60.20
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.64	1.93	1.93	1.94	1.94	1.95	1.95	1.96	1.96	1.97	1.97
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.26	2.75	2.76	2.76	2.77	2.77	2.77	2.78	2.79	2.79	2.80
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.16
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.16
Cumulative Total Additions	0.00	0.00	1.26	2.75	2.76	2.76	2.77	2.77	2.90	2.91	2.91	2.92	2.96



Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	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
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38	0.38	0.38	0.38
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.39	0.39	0.39	0.39
<b>End-Use Sectors 8/</b>													
Coal	0.28	0.28	0.31	0.31	0.21	0.21	0.52	0.52	0.52	0.52	0.64	0.75	0.87
Petroleum	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
Natural Gas	0.18	0.16	0.18	0.18	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.26
Other Gaseous Fuels	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
Renewable Sources 4/	0.45	0.45	0.46	0.46	0.47	0.49	0.50	0.51	0.52	0.52	0.55	0.56	0.57
Other	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
Total	0.99	0.96	1.01	1.02	0.94	0.97	1.31	1.32	1.33	1.35	1.50	1.64	1.77
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	75.15	79.10	81.71	83.69	85.27	86.55	87.60	88.83	86.35	86.41	86.78	87.68	88.25
Commercial/Other	68.70	71.30	74.26	73.82	76.15	77.39	79.01	80.68	82.47	84.37	86.21	88.06	89.81
Industrial	66.01	66.09	67.89	67.85	68.17	69.10	69.88	70.01	69.82	70.07	70.45	70.84	71.09
Transportation	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.32
Total Sales	210.13	216.77	224.14	225.65	229.88	233.33	236.78	239.82	238.95	241.16	243.75	246.89	249.47
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	7.93	5.24	8.56	9.28	10.15	9.08	6.14	8.95	10.25	9.85	6.19	5.63	5.34
Gross International Exports	6.48	12.36	6.99	6.53	5.90	5.79	5.72	5.66	5.59	5.52	5.46	5.40	5.33
Gross Interregional Electricity Imports	16.26	15.23	16.25	16.06	15.38	14.83	14.83	14.83	13.39	12.08	10.67	9.23	7.78
Gross Interregional Electricity Exports	25.46	26.85	24.47	32.58	40.95	41.96	40.78	40.44	42.99	39.78	34.09	28.65	24.07
Purchases from Combined Heat and Power 8/	1.37	1.40	1.39	1.40	1.33	1.39	2.16	2.19	2.20	2.21	2.70	2.99	3.28
Electric Power Sector Generation for Custome	239.88	255.43	249.94	258.29	270.39	276.11	280.22	279.72	280.85	281.10	282.16	281.75	281.33
Total Net Energy for Load	233.51	238.10	244.68	245.92	250.42	253.65	256.85	259.60	258.11	259.94	262.18	265.55	268.33
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	81.97	74.92	77.80	77.90	78.60	79.11	79.35	79.60	79.84	80.09	80.35	79.54	79.83
Petroleum	0.54	0.50	0.26	0.26	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.31
Natural Gas	23.78	24.58	32.91	31.57	31.57	31.57	30.21	29.46	29.46	29.46	30.22	29.47	28.57
Nuclear	8.24	9.33	8.90	8.93	8.91	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97
Pumped Storage/Other 9/	0.45	0.51	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Renewable Sources 10/	125.43	146.08	130.33	139.89	151.30	156.44	161.66	161.67	162.55	162.55	162.60	163.73	163.92
Total Generation	240.41	255.92	250.32	258.67	270.78	276.49	280.61	280.11	281.23	281.49	282.55	282.14	281.72
Sales to Customers	239.88	255.43	249.94	258.29	270.39	276.11	280.22	279.72	280.85	281.10	282.16	281.75	281.33
Generation for Own Use	0.53	0.49	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Distributed Generation 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

Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	1.39	1.48	1.49	1.49	1.18	1.18	3.50	3.50	3.50	3.50	4.37	5.24	6.11
Petroleum	0.03	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Natural Gas	0.94	0.97	1.05	1.10	1.19	1.24	1.29	1.35	1.40	1.46	1.53	1.59	1.66
Other Gaseous Fuels	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
Renewable Sources 10/	2.27	2.25	2.27	2.28	2.30	2.42	2.52	2.57	2.59	2.63	2.88	2.92	2.97
Other	0.39	0.41	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Total	5.01	5.13	4.95	5.01	4.83	5.00	7.48	7.58	7.66	7.75	8.93	9.92	10.90
Sales to Utilities	1.37	1.40	1.39	1.40	1.33	1.39	2.16	2.19	2.20	2.21	2.70	2.99	3.28
Generation for Own Use	3.64	3.73	3.56	3.61	3.50	3.62	5.31	5.39	5.46	5.54	6.23	6.93	7.63
<b>Total Electricity Generation</b>	<b>245.43</b>	<b>261.05</b>	<b>255.27</b>	<b>263.68</b>	<b>275.61</b>	<b>281.49</b>	<b>288.09</b>	<b>287.69</b>	<b>288.90</b>	<b>289.25</b>	<b>291.49</b>	<b>292.06</b>	<b>292.62</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	7.3	7.3	7.0	7.2	7.4	7.3	7.2	7.1	7.2	7.2	7.3	7.3	7.4
Commercial	6.8	6.8	6.3	6.5	6.4	6.3	6.2	6.1	6.0	6.1	6.1	6.1	6.1
Industrial	4.7	4.6	4.6	4.8	4.8	4.8	4.7	4.6	4.6	4.6	4.6	4.6	4.6
Transportation	6.1	5.8	5.8	6.1	6.0	5.9	5.8	5.7	5.7	5.7	5.7	5.7	5.8
All Sectors Average	6.3	6.3	6.0	6.3	6.3	6.2	6.1	6.0	6.0	6.0	6.1	6.1	6.2
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	3.6	3.6	3.4	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.3	3.3	3.3
Transmission	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Distribution	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	0.88	0.80	0.84	0.84	0.85	0.85	0.86	0.86	0.86	0.86	0.87	0.86	0.86
Natural Gas	0.19	0.20	0.27	0.26	0.25	0.25	0.24	0.23	0.23	0.23	0.24	0.23	0.23
Oil	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.08	1.01	1.12	1.10	1.11	1.11	1.10	1.10	1.10	1.10	1.11	1.10	1.09
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.18	1.14	1.19	1.22	1.29	1.31	1.31	1.28	1.28	1.28	1.28	1.27	1.27
Natural Gas	6.69	5.75	6.63	7.13	7.17	6.77	6.42	6.21	5.92	5.74	5.66	5.65	5.75
Distillate Fuel Oil	13.28	14.04	16.09	18.48	14.17	13.59	12.95	12.42	11.95	11.67	11.15	10.81	10.86
Residual Fuel Oil	8.47	9.65	10.22	12.39	10.79	9.98	9.44	8.03	7.64	7.49	7.03	6.73	6.72
Biomass	1.89	1.87	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	2.11	2.04	2.04
<b>Emissions 12/</b>													
Total Carbon (million tons)	29.08	28.35	28.92	28.69	28.83	28.83	28.71	28.70	28.78	28.87	29.05	28.70	28.69
Carbon Dioxide (million tons)	106.63	103.96	106.04	105.19	105.70	105.71	105.27	105.24	105.54	105.85	106.52	105.25	105.19
Sulfur Dioxide (million tons)	0.10	0.10	0.11	0.10	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
Nitrogen Oxide (million tons)	0.18	0.17	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15
Mercury (tons)	1.77	1.64	1.52	1.62	1.68	1.52	1.51	1.40	1.43	1.39	1.32	1.27	1.27

Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	11.59	11.59	11.59	11.77	12.52	13.29	14.07	14.70	15.29	16.01	16.78	17.52	18.22	2.0%
Oil and Natural Gas Steam 2/	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	-0.1%
Combined Cycle	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	0.5%
Combustion Turbine/Diesel	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	-0.8%
Nuclear Power	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	0.0%
Pumped Storage/Other 3/	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.0%
Fuel Cells	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	--
Renewable Sources 4/	38.64	38.64	40.12	40.12	40.32	40.48	40.62	40.94	41.12	41.26	41.36	41.42	41.65	0.6%
Distributed Generation 5/	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	0.45	0.49	0.53	--
Total Capacity	60.36	60.40	61.92	62.14	63.13	64.11	65.07	66.05	66.86	67.77	68.68	69.52	70.49	0.8%
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.98	1.99	1.99	2.00	2.01	2.01	2.02	2.02	2.03	2.04	2.04	2.05	2.06	--
Distributed Generation 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	--
Total Planned Additions	2.80	2.81	2.82	2.82	2.83	2.84	2.84	2.85	2.86	2.86	2.87	2.87	2.88	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	0.00	0.00	0.00	0.18	0.93	1.70	2.48	3.11	3.70	4.42	5.19	5.93	6.63	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.28	0.28	1.74	1.74	1.93	2.09	2.22	2.54	2.71	2.85	2.94	2.99	3.21	--
Distributed Generation 5/	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	0.45	0.49	0.53	--
Total Unplanned Additions	0.32	0.35	1.86	2.08	3.06	4.03	4.99	5.97	6.76	7.67	8.58	9.41	10.37	--
Cumulative Total Additions	3.12	3.16	4.68	4.90	5.89	6.87	7.83	8.81	9.62	10.53	11.44	12.28	13.25	--

Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	--
<b>End-Use Sectors 8/</b>														
Coal	1.23	1.37	1.46	1.57	1.57	1.79	1.79	1.78	1.97	2.11	2.54	2.82	2.82	10.1%
Petroleum	0.13	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	9.8%
Natural Gas	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.35	0.36	0.37	0.38	0.39	0.40	3.8%
Other Gaseous Fuels	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	--
Renewable Sources 4/	0.64	0.66	0.70	0.73	0.75	0.76	0.77	0.80	0.81	0.83	0.85	0.87	0.89	2.9%
Other	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	0.0%
Total	2.33	2.48	2.61	2.77	2.80	3.04	3.07	3.10	3.31	3.48	3.94	4.25	4.28	6.4%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	89.11	89.89	90.42	90.89	91.82	92.84	94.13	95.04	96.28	97.56	99.04	100.04	101.33	1.0%
Commercial/Other	91.56	93.28	95.03	96.89	98.68	100.46	102.22	103.97	105.76	107.60	109.45	111.28	113.15	1.9%
Industrial	71.26	71.01	70.77	70.91	70.90	71.06	71.17	71.29	71.54	71.74	71.88	72.08	72.34	0.4%
Transportation	0.32	0.32	0.33	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.38	1.4%
Total Sales	252.25	254.50	256.56	259.02	261.75	264.71	267.87	270.66	273.94	277.27	280.75	283.77	287.19	1.2%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	5.40	5.28	5.57	4.93	4.82	5.33	5.33	5.33	5.33	5.33	5.33	6.31	6.26	0.7%
Gross International Exports	5.27	5.21	5.14	5.08	5.02	4.76	4.30	4.05	4.05	4.05	4.05	4.05	4.05	-4.5%
Gross Interregional Electricity Imports	6.34	4.90	3.82	1.82	0.75	0.75	0.75	1.09	2.62	4.39	4.59	5.61	6.97	-3.2%
Gross Interregional Electricity Exports	21.84	18.41	11.79	6.94	5.98	11.71	15.14	14.03	17.09	21.73	25.39	30.25	34.36	1.0%
Purchases from Combined Heat and Power 8/	4.40	4.75	5.23	5.64	5.74	6.23	6.19	6.22	6.66	7.00	8.01	8.69	8.71	7.9%
Electric Power Sector Generation for Custome	282.29	282.42	278.27	278.23	281.23	288.89	295.28	296.57	301.17	307.30	313.48	318.91	325.38	1.0%
Total Net Energy for Load	271.32	273.74	275.96	278.61	281.54	284.73	288.13	291.13	294.65	298.24	301.98	305.23	308.91	1.1%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	80.68	80.75	80.22	81.38	87.69	93.83	99.65	103.51	108.32	113.84	119.49	124.97	130.26	2.3%
Petroleum	0.31	0.31	0.32	0.33	0.39	0.44	0.51	0.55	0.60	0.65	0.73	0.79	0.91	2.5%
Natural Gas	28.59	28.40	17.76	16.46	12.77	13.83	13.72	8.63	7.99	8.01	7.98	7.67	7.70	-4.7%
Nuclear	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	-0.2%
Pumped Storage/Other 9/	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	-5.8%
Renewable Sources 10/	164.02	164.25	171.27	171.36	171.68	172.08	172.70	175.18	175.57	176.11	176.58	176.78	177.82	0.8%
Total Generation	282.68	282.81	278.66	278.63	281.62	289.28	295.67	296.96	301.57	307.69	313.88	319.30	325.77	1.0%
Sales to Customers	282.29	282.42	278.27	278.23	281.23	288.89	295.28	296.57	301.17	307.30	313.48	318.91	325.38	1.0%
Generation for Own Use	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	-0.9%
Distributed Generation 5/	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.21	0.23	--

Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	8.76	9.84	10.47	11.33	11.33	12.97	12.96	12.90	14.28	15.32	18.53	20.64	20.64	11.6%
Petroleum	0.04	0.32	0.74	0.85	0.85	0.85	0.89	0.89	0.89	0.89	0.89	0.89	0.89	16.2%
Natural Gas	1.73	1.82	1.91	2.00	2.08	2.16	2.24	2.31	2.39	2.47	2.54	2.62	2.70	4.4%
Other Gaseous Fuels	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	--
Renewable Sources 10/	3.49	3.55	3.87	4.06	4.20	4.24	4.26	4.39	4.45	4.53	4.61	4.68	4.77	3.2%
Other	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	-5.0%
Total	14.14	15.64	17.11	18.36	18.58	20.34	20.47	20.63	22.14	23.33	26.69	28.96	29.12	7.5%
Sales to Utilities	4.40	4.75	5.23	5.64	5.74	6.23	6.19	6.22	6.66	7.00	8.01	8.69	8.71	7.9%
Generation for Own Use	9.75	10.89	11.88	12.72	12.85	14.11	14.27	14.41	15.48	16.33	18.68	20.27	20.41	7.3%
<b>Total Electricity Generation</b>	<b>296.84</b>	<b>298.49</b>	<b>295.82</b>	<b>297.06</b>	<b>300.29</b>	<b>309.72</b>	<b>316.26</b>	<b>317.73</b>	<b>323.86</b>	<b>331.20</b>	<b>340.76</b>	<b>348.48</b>	<b>355.12</b>	<b>1.3%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	7.5	7.6	7.6	7.7	7.8	7.9	7.9	8.0	8.1	8.2	8.2	8.3	8.4	0.5%
Commercial	6.2	6.3	6.3	6.3	6.4	6.5	6.5	6.6	6.7	6.7	6.7	6.8	6.9	0.0%
Industrial	4.7	4.7	4.7	4.7	4.8	4.8	4.9	4.9	5.0	5.0	5.0	5.1	5.1	0.5%
Transportation	5.9	5.9	5.9	5.9	6.0	6.0	6.0	6.1	6.2	6.2	6.3	6.3	6.4	0.4%
All Sectors Average	6.3	6.3	6.3	6.4	6.5	6.5	6.6	6.7	6.7	6.8	6.8	6.9	7.0	0.4%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	3.4	3.5	3.5	3.5	3.6	3.6	3.7	3.8	3.8	3.9	3.9	4.0	4.0	0.4%
Transmission	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1%
Distribution	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	0.87	0.87	0.87	0.88	0.93	0.99	1.04	1.07	1.12	1.16	1.21	1.26	1.31	2.1%
Natural Gas	0.23	0.23	0.15	0.14	0.11	0.12	0.12	0.08	0.08	0.08	0.08	0.07	0.07	-4.1%
Oil	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	0.2%
Total	1.10	1.10	1.02	1.02	1.05	1.11	1.16	1.16	1.20	1.25	1.30	1.34	1.39	1.3%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.27	1.27	1.28	1.28	1.29	1.31	1.37	1.40	1.42	1.43	1.45	1.47	1.49	1.1%
Natural Gas	5.84	5.89	5.64	5.48	5.60	5.75	5.92	6.09	6.27	6.38	6.58	6.79	6.98	0.8%
Distillate Fuel Oil	11.06	11.27	11.51	11.60	11.74	12.02	12.36	12.53	12.84	13.05	13.20	13.48	13.58	-0.1%
Residual Fuel Oil	6.85	7.12	7.35	7.47	7.55	7.76	7.95	8.12	8.29	8.32	8.50	8.58	8.77	-0.4%
Biomass	2.07	2.06	2.01	1.99	2.00	2.04	2.04	1.96	1.98	1.99	2.00	2.01	1.89	0.0%
<b>Emissions 12/</b>														
Total Carbon (million tons)	28.96	28.96	27.54	27.69	28.92	30.64	32.13	32.48	33.67	35.11	36.57	37.95	39.33	1.4%
Carbon Dioxide (million tons)	106.18	106.20	100.98	101.52	106.03	112.35	117.79	119.10	123.47	128.73	134.07	139.14	144.21	1.4%
Sulfur Dioxide (million tons)	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.13	0.13	1.0%
Nitrogen Oxide (million tons)	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.1%
Mercury (tons)	1.30	1.31	1.29	1.28	1.32	1.35	1.34	1.34	1.32	1.32	1.30	1.23	1.01	-2.0%

Table 72. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	16.43	16.83	16.90	16.90	18.05	18.05	18.49	18.49	18.49	18.49	18.49	18.78	19.91
Oil and Natural Gas Steam 2/	3.11	3.11	3.11	3.11	3.11	3.11	3.11	3.09	3.09	3.09	3.09	3.09	3.09
Combined Cycle	14.98	17.02	17.65	17.82	18.32	18.59	19.24	20.10	20.10	20.10	20.10	20.10	20.10
Combustion Turbine/Diesel	5.06	5.28	5.55	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
Nuclear Power	2.81	2.81	2.84	2.84	2.84	2.84	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Pumped Storage/Other 3/	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Fuel Cells	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
Renewable Sources 4/	6.12	6.29	7.24	7.30	7.30	7.31	7.36	7.37	7.37	7.37	7.38	7.38	7.47
Distributed Generation 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
Total Capacity	49.30	52.12	54.07	55.00	56.65	56.92	58.12	58.95	58.96	58.96	58.97	59.25	60.48
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	0.07	0.07	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.63	0.80	1.30	1.57	2.22	3.08	3.08	3.08	3.08	3.08	3.08
Combustion Turbine/Diesel	0.00	0.00	0.27	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	1.00	1.05	1.06	1.06	1.07	1.07	1.08	1.08	1.08	1.09	1.09
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.93	2.85	4.51	4.78	5.44	6.30	6.31	6.31	6.31	6.32	6.32
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.44	0.44	0.44	0.44	0.73	1.86
Oil and Natural Gas Steam 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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.14
Distributed Generation 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
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.49	0.49	0.77	2.00
Cumulative Total Additions	0.00	0.00	1.93	2.85	4.51	4.78	5.93	6.79	6.80	6.80	6.81	7.09	8.32

Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03
<b>End-Use Sectors 8/</b>													
Coal	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Petroleum	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.25	0.19	0.21	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.37	0.39	0.42
Other Gaseous Fuels	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
Renewable Sources 4/	0.01	0.02	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06
Other	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
Total	0.33	0.28	0.31	0.33	0.36	0.38	0.40	0.42	0.44	0.47	0.49	0.52	0.55
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	64.74	68.81	70.72	71.98	73.91	75.58	77.02	78.68	77.55	78.31	79.31	80.71	81.83
Commercial/Other	64.29	67.12	67.97	67.47	69.85	71.13	72.82	74.61	76.50	78.50	80.45	82.38	84.21
Industrial	39.33	40.65	41.12	42.39	39.24	39.84	40.34	40.42	40.33	40.43	40.66	40.90	41.03
Transportation	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Total Sales	168.41	176.65	179.86	181.90	183.06	186.61	190.25	193.77	194.45	197.30	200.48	204.07	207.14
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	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
Gross International Exports	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
Gross Interregional Electricity Imports	12.76	13.18	11.99	9.61	9.37	6.32	6.41	6.27	6.91	8.32	8.90	13.07	14.22
Gross Interregional Electricity Exports	48.48	51.80	51.50	60.21	55.39	56.45	56.38	58.10	55.99	55.78	54.61	54.14	54.41
Purchases from Combined Heat and Power 8/	0.19	0.18	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.47
Electric Power Sector Generation for Custome	215.35	212.39	235.68	248.66	245.22	252.75	256.08	261.29	258.80	259.77	260.96	260.15	262.54
Total Net Energy for Load	179.81	173.95	196.36	198.26	199.44	202.89	206.40	209.78	210.06	212.69	215.66	219.52	222.82
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	120.75	117.08	122.94	122.62	124.84	130.19	136.21	136.74	137.18	137.28	135.43	137.06	144.76
Petroleum	0.12	0.15	0.51	0.50	0.52	0.54	0.60	0.58	0.58	0.58	0.58	0.60	0.68
Natural Gas	64.21	64.92	77.14	88.37	81.71	83.37	79.97	84.66	81.72	82.58	83.65	80.85	74.91
Nuclear	18.73	17.43	22.73	22.37	22.37	22.37	22.67	22.67	22.67	22.67	22.67	22.67	22.67
Pumped Storage/Other 9/	0.14	0.18	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13
Renewable Sources 10/	14.74	16.23	16.59	19.04	20.02	20.52	20.86	20.87	20.88	20.89	22.86	23.21	23.76
Total Generation	218.70	215.98	239.78	252.76	249.32	256.85	260.18	265.39	262.90	263.88	265.06	264.25	266.64
Sales to Customers	215.35	212.39	235.68	248.66	245.22	252.75	256.08	261.29	258.80	259.77	260.96	260.15	262.54
Generation for Own Use	3.35	3.60	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10
Distributed Generation 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



Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.37	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Petroleum	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
Natural Gas	0.63	0.69	0.85	0.97	1.12	1.27	1.42	1.57	1.73	1.90	2.07	2.26	2.46
Other Gaseous Fuels	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Renewable Sources 10/	0.03	0.04	0.06	0.07	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.11	0.11
Other	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
Total	1.03	1.12	1.30	1.43	1.61	1.76	1.92	2.07	2.23	2.40	2.58	2.78	2.98
Sales to Utilities	0.19	0.18	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.47
Generation for Own Use	0.84	0.93	1.11	1.22	1.37	1.50	1.62	1.75	1.89	2.02	2.18	2.34	2.51
<b>Total Electricity Generation</b>	<b>219.73</b>	<b>217.10</b>	<b>241.08</b>	<b>254.19</b>	<b>250.93</b>	<b>258.61</b>	<b>262.10</b>	<b>267.47</b>	<b>265.13</b>	<b>266.28</b>	<b>267.65</b>	<b>267.03</b>	<b>269.62</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	9.5	9.6	10.7	11.1	11.3	11.1	10.9	10.7	10.7	10.7	10.8	10.9	11.0
Commercial	8.1	8.1	8.6	8.7	8.8	8.6	8.3	8.0	7.9	7.8	7.8	7.8	7.8
Industrial	6.4	6.5	6.9	7.2	7.2	7.0	6.7	6.6	6.4	6.3	6.3	6.3	6.3
Transportation	8.0	7.8	7.8	8.3	8.3	8.2	8.0	7.9	7.7	7.7	7.7	7.7	7.7
All Sectors Average	8.2	8.3	9.0	9.3	9.5	9.3	9.0	8.8	8.7	8.6	8.7	8.7	8.8
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	5.7	5.8	6.5	6.7	6.8	6.5	6.2	6.0	5.8	5.7	5.6	5.7	5.7
Transmission	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Distribution	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	1.27	1.25	1.31	1.31	1.33	1.38	1.44	1.45	1.45	1.45	1.43	1.45	1.52
Natural Gas	0.52	0.53	0.64	0.72	0.66	0.66	0.63	0.67	0.64	0.65	0.66	0.64	0.59
Oil	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
Total	1.79	1.78	1.96	2.04	2.00	2.05	2.08	2.12	2.10	2.11	2.10	2.09	2.11
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.38	1.43	1.44	1.47	1.49	1.50	1.51	1.50	1.50	1.50	1.49	1.49	1.49
Natural Gas	7.56	6.22	6.92	7.25	7.28	6.84	6.49	6.35	6.10	6.00	5.93	5.89	5.93
Distillate Fuel Oil	12.72	13.44	16.33	18.60	14.91	14.10	13.64	12.87	12.17	11.88	11.28	10.85	10.88
Residual Fuel Oil	7.99	9.19	9.73	11.79	10.84	10.03	9.49	8.09	7.71	7.55	7.10	6.79	6.78
Biomass	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
<b>Emissions 12/</b>													
Total Carbon (million tons)	46.95	47.22	48.24	49.47	49.06	50.66	51.84	52.53	52.28	52.43	51.99	52.04	53.26
Carbon Dioxide (million tons)	172.17	173.13	176.88	181.37	179.90	185.74	190.09	192.60	191.69	192.25	190.64	190.83	195.30
Sulfur Dioxide (million tons)	0.14	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10
Nitrogen Oxide (million tons)	0.27	0.25	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Mercury (tons)	2.08	1.84	2.00	1.96	2.05	1.79	1.88	1.64	1.71	1.68	1.65	1.52	1.52

Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	21.20	22.42	23.91	25.32	26.50	27.76	29.06	30.38	31.67	32.92	34.05	35.03	35.97	3.2%
Oil and Natural Gas Steam 2/	3.09	2.93	2.81	2.70	2.69	2.69	2.61	2.50	2.50	2.50	2.50	2.50	2.50	-0.9%
Combined Cycle	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	0.7%
Combustion Turbine/Diesel	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.41	6.59	6.80	1.1%
Nuclear Power	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	0.1%
Pumped Storage/Other 3/	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.0%
Fuel Cells	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	--
Renewable Sources 4/	7.48	7.62	7.66	7.66	7.70	7.73	7.82	7.90	7.90	7.90	7.91	7.91	7.97	1.0%
Distributed Generation 5/	0.00	0.00	0.00	0.02	0.05	0.07	0.09	0.12	0.18	0.25	0.40	0.60	0.81	--
Total Capacity	61.78	62.97	64.39	65.71	66.94	68.26	69.60	70.90	72.25	73.58	75.03	76.38	77.81	1.7%
<b>Cumulative Planned Additions 6/</b>														
Coal	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	--
Oil and Natural Gas Steam 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	--
Combined Cycle	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	--
Combustion Turbine/Diesel	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.09	1.10	1.10	1.10	1.11	1.11	1.11	1.12	1.12	1.13	1.13	1.13	1.14	--
Distributed Generation 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	--
Total Planned Additions	6.32	6.33	6.33	6.33	6.34	6.34	6.34	6.35	6.35	6.36	6.36	6.36	6.37	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	3.15	4.37	5.87	7.27	8.45	9.71	11.01	12.33	13.62	14.87	16.00	16.98	17.92	--
Oil and Natural Gas Steam 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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.34	0.56	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.14	0.28	0.31	0.31	0.35	0.38	0.46	0.53	0.53	0.53	0.53	0.53	0.59	--
Distributed Generation 5/	0.00	0.00	0.00	0.02	0.05	0.07	0.09	0.12	0.18	0.25	0.40	0.60	0.81	--
Total Unplanned Additions	3.29	4.64	6.18	7.61	8.85	10.15	11.57	12.98	14.33	15.65	17.10	18.45	19.87	--
Cumulative Total Additions	9.62	10.97	12.51	13.94	15.18	16.50	17.92	19.33	20.68	22.01	23.45	24.81	26.24	--

Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	0.03	0.19	0.31	0.42	0.42	0.42	0.50	0.61	0.61	0.61	0.61	0.61	0.61	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	0.03	0.19	0.31	0.42	0.42	0.42	0.50	0.61	0.61	0.61	0.61	0.61	0.61	--
<b>End-Use Sectors 8/</b>														
Coal	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.0%
Petroleum	0.10	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	13.3%
Natural Gas	0.46	0.49	0.52	0.55	0.58	0.61	0.64	0.66	0.69	0.72	0.75	0.78	0.81	6.2%
Other Gaseous Fuels	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	--
Renewable Sources 4/	0.06	0.07	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.17	0.18	0.20	11.0%
Other	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	--
Total	0.69	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99	1.03	1.07	1.12	1.17	6.1%
<b>Electricity Demand</b>														
<b>(billion kilowatthours)</b>														
Residential	83.16	84.40	85.50	86.54	87.89	89.30	90.95	92.27	93.91	95.60	97.46	98.91	100.65	1.6%
Commercial/Other	86.05	87.82	89.66	91.61	93.43	95.19	96.95	98.71	100.52	102.43	104.38	106.34	108.40	2.0%
Industrial	41.14	40.89	40.58	40.60	40.61	40.67	40.69	40.78	40.89	41.08	41.17	41.27	41.43	0.1%
Transportation	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	1.9%
Total Sales	210.42	213.18	215.82	218.82	222.01	225.24	228.67	231.84	235.42	239.19	243.10	246.61	250.56	1.5%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	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	--
Gross International Exports	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	--
Gross Interregional Electricity Imports	12.10	6.24	5.02	2.24	2.70	3.99	4.05	5.36	5.88	5.66	5.87	5.42	5.19	-3.8%
Gross Interregional Electricity Exports	52.81	51.50	52.49	52.99	50.02	49.00	50.32	52.80	54.15	57.48	59.70	62.35	66.10	1.0%
Purchases from Combined Heat and Power 8/	0.51	0.54	0.59	0.62	0.66	0.70	0.73	0.77	0.80	0.83	0.87	0.90	0.94	7.0%
Electric Power Sector Generation for Custome	266.55	274.04	279.04	285.51	285.48	286.61	291.52	296.07	300.70	308.28	314.48	321.30	329.50	1.8%
Total Net Energy for Load	226.35	229.32	232.16	235.39	238.81	242.30	245.98	249.39	253.24	257.30	261.51	265.27	269.53	1.8%
<b>Generation by Fuel Type</b>														
<b>(billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	153.85	163.25	172.30	182.41	190.13	198.81	208.21	217.87	227.07	236.09	244.12	251.05	258.09	3.3%
Petroleum	0.80	0.90	1.01	1.19	1.28	1.37	1.47	1.57	1.67	1.76	1.87	1.97	2.04	11.6%
Natural Gas	69.15	66.58	59.91	55.93	46.99	38.70	33.42	27.76	22.85	21.07	18.84	18.40	19.22	-4.9%
Nuclear	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	1.1%
Pumped Storage/Other 9/	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	--
Renewable Sources 10/	24.32	24.88	27.38	27.55	28.64	29.30	29.99	30.43	30.68	30.94	31.21	31.45	31.72	2.8%
Total Generation	270.66	278.14	283.14	289.62	289.58	290.71	295.62	300.17	304.81	312.39	318.58	325.40	333.60	1.8%
Sales to Customers	266.55	274.04	279.04	285.51	285.48	286.61	291.52	296.07	300.70	308.28	314.48	321.30	329.50	1.8%
Generation for Own Use	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	4.10	0.6%
Distributed Generation 5/	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.08	0.11	0.18	0.26	0.35	--

Table 73. Electric Power Projections for EMM Region  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.0%
Petroleum	0.01	0.23	0.57	0.66	0.66	0.66	0.69	0.69	0.69	0.69	0.69	0.69	0.69	30.6%
Natural Gas	2.66	2.91	3.19	3.43	3.66	3.88	4.10	4.32	4.53	4.74	4.95	5.16	5.38	8.9%
Other Gaseous Fuels	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	--
Renewable Sources 10/	0.12	0.13	0.15	0.16	0.18	0.19	0.21	0.23	0.26	0.30	0.33	0.37	0.41	10.4%
Other	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	--
Total	3.19	3.67	4.31	4.66	4.90	5.14	5.41	5.65	5.90	6.14	6.38	6.63	6.88	7.9%
Sales to Utilities	0.51	0.54	0.59	0.62	0.66	0.70	0.73	0.77	0.80	0.83	0.87	0.90	0.94	7.0%
Generation for Own Use	2.69	3.13	3.72	4.03	4.24	4.44	4.68	4.89	5.10	5.30	5.51	5.73	5.95	8.0%
<b>Total Electricity Generation</b>	<b>273.85</b>	<b>281.81</b>	<b>287.45</b>	<b>294.28</b>	<b>294.50</b>	<b>295.89</b>	<b>301.07</b>	<b>305.88</b>	<b>310.78</b>	<b>318.63</b>	<b>325.14</b>	<b>332.29</b>	<b>340.84</b>	<b>1.9%</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)														
Residential	11.1	11.2	11.1	11.0	11.2	11.4	11.4	11.6	11.7	11.7	11.7	11.8	11.7	0.8%
Commercial	7.9	7.9	7.8	7.6	7.7	7.8	7.8	7.9	8.0	8.0	8.0	8.0	8.0	-0.1%
Industrial	6.3	6.4	6.3	6.1	6.2	6.3	6.3	6.4	6.4	6.4	6.4	6.5	6.4	-0.1%
Transportation	7.8	7.9	7.8	7.6	7.7	7.4	7.5	7.6	7.7	7.7	7.8	7.8	7.7	0.0%
All Sectors Average	8.8	8.9	8.8	8.7	8.8	8.9	9.0	9.1	9.2	9.2	9.2	9.3	9.2	0.4%
<b>Prices by Service Category</b> (2006 cents per kilowatthour)														
Generation	5.7	5.7	5.6	5.4	5.5	5.6	5.6	5.7	5.7	5.7	5.8	5.8	5.7	0.0%
Transmission	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.8%
Distribution	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.7%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	1.60	1.68	1.76	1.85	1.91	1.99	2.07	2.16	2.24	2.32	2.39	2.44	2.51	3.0%
Natural Gas	0.55	0.53	0.48	0.45	0.38	0.31	0.28	0.23	0.20	0.18	0.17	0.16	0.17	-4.6%
Oil	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	10.8%
Total	2.15	2.22	2.24	2.31	2.31	2.32	2.36	2.40	2.45	2.52	2.57	2.63	2.70	1.7%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.50	1.51	1.51	1.52	1.53	1.55	1.57	1.59	1.60	1.62	1.63	1.64	1.65	0.6%
Natural Gas	5.95	6.00	5.67	5.38	5.49	5.68	5.84	6.01	6.19	6.33	6.55	6.78	6.98	0.5%
Distillate Fuel Oil	11.01	11.15	11.37	11.42	11.60	11.86	12.22	12.40	12.71	12.87	13.03	13.31	13.44	0.0%
Residual Fuel Oil	6.91	7.18	7.55	7.67	7.75	7.96	8.15	8.32	8.49	8.52	8.70	8.79	8.98	-0.1%
Biomass	1.87	1.87	1.86	1.84	1.85	1.83	1.84	1.88	1.85	1.86	1.86	1.89	1.84	-0.1%
<b>Emissions 12/</b>														
Total Carbon (million tons)	54.84	56.88	58.29	60.42	61.18	62.31	64.03	65.74	67.44	69.46	71.22	72.85	74.67	1.9%
Carbon Dioxide (million tons)	201.10	208.56	213.73	221.54	224.31	228.49	234.78	241.05	247.28	254.70	261.12	267.13	273.79	1.9%
Sulfur Dioxide (million tons)	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.13	0.13	0.12	0.13	0.12	0.14	0.6%
Nitrogen Oxide (million tons)	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.29	0.29	0.7%
Mercury (tons)	1.35	1.36	1.29	1.15	1.11	1.06	1.01	1.01	1.00	1.01	0.99	0.89	0.89	-3.0%

Table 73. Electric Power Projections for EMM Region

Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
Oil and Natural Gas Steam 2/	15.96	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58
Combined Cycle	12.88	14.05	14.80	14.80	15.87	15.87	15.87	15.87	15.87	15.87	16.00	16.60	17.21
Combustion Turbine/Diesel	6.09	6.14	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.89	6.99	7.08
Nuclear Power	5.45	5.45	5.46	5.46	5.46	5.46	5.48	5.48	5.48	5.48	5.48	5.48	5.48
Pumped Storage/Other 3/	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69
Fuel Cells	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
Renewable Sources 4/	15.08	15.32	15.36	15.59	15.89	16.40	16.60	16.78	16.91	17.05	17.10	17.16	17.26
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.07	0.11	0.16	0.21	0.25	0.29	0.44	0.59	0.72
Total Capacity	63.46	64.53	65.76	66.00	67.43	67.98	68.25	68.48	68.65	68.83	69.48	70.39	71.33
<b>Cumulative Planned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.76	0.76	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82
Combustion Turbine/Diesel	0.00	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.08	0.31	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.40
Distributed Generation 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
Total Planned Additions	0.00	0.00	1.22	1.46	2.57	2.57	2.58	2.58	2.59	2.59	2.60	2.60	2.61
<b>Cumulative Unplanned Additions 6/</b>													
Coal	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
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.73	1.34
Combustion Turbine/Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.42	0.51
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.25	0.76	0.95	1.13	1.26	1.39	1.44	1.49	1.59
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.07	0.11	0.16	0.21	0.25	0.29	0.44	0.59	0.72
Total Unplanned Additions	0.00	0.00	0.00	0.00	0.32	0.87	1.11	1.34	1.50	1.68	2.33	3.23	4.17
Cumulative Total Additions	0.00	0.00	1.22	1.46	2.89	3.44	3.69	3.92	4.09	4.27	4.92	5.83	6.77

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	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
Oil and Natural Gas Steam 3/	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
Combined Cycle	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
Combustion Turbine/Diesel	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
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	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
<b>End-Use Sectors 8/</b>													
Coal	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Petroleum	0.13	0.16	0.10	0.10	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Natural Gas	2.19	2.15	2.36	2.39	2.52	2.56	2.59	2.63	2.67	2.71	2.76	2.80	2.85
Other Gaseous Fuels	0.25	0.14	0.03	0.03	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Renewable Sources 4/	0.41	0.48	0.62	0.72	0.73	0.78	0.79	0.80	0.81	0.82	0.86	0.91	0.95
Other	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.10	3.02	3.20	3.33	3.77	3.85	3.90	3.94	3.99	4.05	4.13	4.22	4.31
<b>Electricity Demand</b>													
<b>(billion kilowatthours)</b>													
Residential	83.02	87.66	85.74	88.07	89.39	90.40	91.17	92.10	88.92	88.56	88.54	89.11	89.35
Commercial/Other	116.25	121.20	120.74	120.21	123.61	125.44	127.82	130.24	132.84	135.62	138.32	141.04	143.60
Industrial	49.35	48.41	46.81	45.23	49.35	49.98	50.52	50.61	50.47	50.70	50.96	51.20	51.40
Transportation	0.46	0.48	0.47	0.48	0.49	0.50	0.50	0.51	0.51	0.52	0.52	0.53	0.53
Total Sales	249.08	257.74	253.76	253.99	262.83	266.31	270.00	273.46	272.74	275.40	278.34	281.88	284.88
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	1.50	0.80	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Gross International Exports	0.10	0.60	0.50	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gross Interregional Electricity Imports	51.67	50.78	59.21	75.85	79.19	81.60	80.01	81.43	83.27	81.31	75.99	67.64	63.09
Gross Interregional Electricity Exports	6.64	3.30	3.28	3.28	3.61	3.34	3.34	3.35	3.57	3.81	4.06	4.18	3.55
Purchases from Combined Heat and Power 8/	10.45	10.65	10.38	10.43	10.85	10.90	10.95	10.99	11.04	11.08	11.13	11.19	11.24
Electric Power Sector Generation for Custome	210.74	219.79	211.16	194.15	200.23	200.58	205.52	207.19	204.11	208.48	216.47	228.64	235.68
Total Net Energy for Load	267.62	278.12	278.16	277.94	287.46	290.64	294.04	297.15	295.74	297.96	300.44	304.18	307.35
<b>Generation by Fuel Type</b>													
<b>(billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	30.88	24.62	27.01	27.11	27.55	27.98	32.12	32.14	32.18	32.20	32.23	32.26	32.28
Petroleum	2.06	1.86	0.07	0.07	0.08	0.08	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Natural Gas	77.21	88.03	87.04	68.33	71.08	67.20	65.85	66.23	62.46	66.14	73.72	85.75	92.18
Nuclear	43.23	38.54	43.18	43.02	42.95	42.99	43.10	43.10	43.10	43.10	43.10	43.10	43.10
Pumped Storage/Other 9/	0.85	0.82	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Renewable Sources 10/	58.99	68.48	56.53	58.28	61.24	65.00	66.99	68.26	68.92	69.58	69.96	70.07	70.66
Total Generation	213.21	222.36	213.86	196.85	202.93	203.28	208.22	209.89	206.81	211.18	219.17	231.34	238.38
Sales to Customers	210.74	219.79	211.16	194.15	200.23	200.58	205.52	207.19	204.11	208.48	216.47	228.64	235.68
Generation for Own Use	2.47	2.56	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.03	0.21	0.42	0.44	0.44	0.45	0.45	0.46	0.46

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Petroleum	0.61	0.51	0.53	0.53	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Natural Gas	14.53	14.83	15.69	15.93	16.87	17.15	17.43	17.72	18.02	18.32	18.65	18.99	19.36
Other Gaseous Fuels	2.02	1.95	1.81	1.81	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Renewable Sources 10/	1.66	1.81	2.04	2.21	2.24	2.34	2.37	2.39	2.41	2.43	2.51	2.59	2.67
Other	0.38	0.41	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Total	19.89	20.19	21.01	21.42	22.17	22.54	22.85	23.17	23.49	23.82	24.22	24.65	25.09
Sales to Utilities	10.45	10.65	10.38	10.43	10.85	10.90	10.95	10.99	11.04	11.08	11.13	11.19	11.24
Generation for Own Use	9.43	9.54	10.62	10.99	11.32	11.64	11.90	12.17	12.45	12.73	13.09	13.46	13.85
<b>Total Electricity Generation</b>	<b>233.10</b>	<b>242.54</b>	<b>234.87</b>	<b>218.27</b>	<b>225.13</b>	<b>226.03</b>	<b>231.50</b>	<b>233.49</b>	<b>230.74</b>	<b>235.45</b>	<b>243.85</b>	<b>256.44</b>	<b>263.93</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	12.9	14.5	14.7	14.7	14.7	14.4	13.9	13.6	13.6	13.5	13.5	13.5	13.5
Commercial	12.1	13.0	12.8	13.0	13.0	12.7	12.2	11.9	11.6	11.5	11.4	11.3	11.3
Industrial	9.7	10.1	10.3	10.5	10.5	10.2	9.8	9.5	9.3	9.2	9.2	9.1	9.1
Transportation	12.8	12.1	12.3	12.6	12.6	12.2	11.8	11.5	11.2	11.1	11.0	11.0	10.9
All Sectors Average	11.9	12.9	13.0	13.1	13.1	12.8	12.3	12.0	11.8	11.7	11.7	11.6	11.6
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	6.1	7.2	7.3	7.9	7.8	7.5	7.0	6.8	6.6	6.4	6.4	6.4	6.4
Transmission	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
Distribution	5.1	5.1	5.0	4.6	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	0.32	0.25	0.28	0.28	0.29	0.29	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Natural Gas	0.69	0.78	0.80	0.65	0.67	0.63	0.62	0.62	0.59	0.62	0.67	0.76	0.81
Oil	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.04	1.05	1.09	0.93	0.95	0.92	0.96	0.96	0.93	0.96	1.02	1.10	1.15
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.42	1.47	1.49	1.51	1.54	1.54	1.54	1.53	1.53	1.53	1.52	1.51	1.52
Natural Gas	7.86	6.29	7.43	7.67	7.67	7.23	6.87	6.70	6.42	6.31	6.24	6.16	6.18
Distillate Fuel Oil	13.03	14.12	16.08	18.48	14.23	13.67	13.27	12.63	12.05	11.77	11.21	10.83	10.87
Residual Fuel Oil	8.60	9.65	10.22	12.39	9.17	8.99	8.45	8.36	8.23	8.10	7.70	7.41	7.51
Biomass	1.89	1.87	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	2.14	2.14	2.14
<b>Emissions 12/</b>													
Total Carbon (million tons)	23.39	22.11	20.98	18.53	18.96	18.50	19.63	19.68	19.23	19.69	20.62	22.04	22.76
Carbon Dioxide (million tons)	85.76	81.08	76.94	67.95	69.51	67.84	71.97	72.16	70.52	72.21	75.62	80.81	83.45
Sulfur Dioxide (million tons)	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Nitrogen Oxide (million tons)	0.03	0.03	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Mercury (tons)	0.33	0.24	0.24	0.25	0.26	0.16	0.30	0.22	0.23	0.22	0.22	0.22	0.22



Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	0.0%
Oil and Natural Gas Steam 2/	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	0.0%
Combined Cycle	17.87	18.54	19.24	19.98	20.76	21.57	22.37	23.15	23.79	23.79	24.03	24.03	24.03	2.3%
Combustion Turbine/Diesel	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.36	8.28	8.50	9.32	10.11	2.1%
Nuclear Power	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	0.0%
Pumped Storage/Other 3/	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	0.0%
Fuel Cells	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	--
Renewable Sources 4/	17.37	17.50	17.60	17.71	17.82	17.98	18.14	18.29	18.44	18.50	19.94	20.05	20.11	1.1%
Distributed Generation 5/	0.87	1.00	1.14	1.28	1.43	1.59	1.74	1.88	2.04	2.19	2.35	2.49	2.63	--
Total Capacity	72.31	73.25	74.19	75.18	76.23	77.34	78.47	79.53	80.68	81.81	83.87	84.94	85.94	1.2%
<b>Cumulative Planned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	--
Combustion Turbine/Diesel	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	0.40	0.41	0.42	0.43	0.43	0.44	0.45	0.46	0.46	0.47	0.48	0.49	0.49	--
Distributed Generation 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	--
Total Planned Additions	2.61	2.62	2.63	2.64	2.64	2.65	2.66	2.67	2.67	2.68	2.69	2.70	2.70	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	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	--
Oil and Natural Gas Steam 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	--
Combined Cycle	2.00	2.67	3.37	4.11	4.89	5.70	6.50	7.28	7.92	7.92	8.16	8.16	8.16	--
Combustion Turbine/Diesel	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.79	1.71	1.94	2.75	3.55	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	1.68	1.81	1.90	2.00	2.11	2.26	2.42	2.56	2.70	2.75	4.18	4.29	4.34	--
Distributed Generation 5/	0.87	1.00	1.14	1.28	1.43	1.59	1.74	1.88	2.04	2.19	2.35	2.49	2.63	--
Total Unplanned Additions	5.14	6.07	7.01	7.98	9.03	10.13	11.25	12.31	13.45	14.57	16.63	17.69	18.67	--
Cumulative Total Additions	7.75	8.69	9.64	10.62	11.67	12.79	13.91	14.98	16.12	17.26	19.32	20.38	21.38	--

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	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	--
Oil and Natural Gas Steam 3/	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	--
Combined Cycle	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	--
Combustion Turbine/Diesel	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	--
Nuclear Power	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	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	--
Total	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	--
<b>End-Use Sectors 8/</b>														
Coal	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.0%
Petroleum	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	1.2%
Natural Gas	2.90	2.95	3.00	3.06	3.12	3.17	3.23	3.28	3.34	3.39	3.45	3.51	3.57	2.1%
Other Gaseous Fuels	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	1.8%
Renewable Sources 4/	1.00	1.04	1.11	1.17	1.24	1.31	1.38	1.46	1.51	1.57	1.63	1.70	1.77	5.6%
Other	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%
Total	4.41	4.51	4.63	4.74	4.87	4.99	5.12	5.26	5.36	5.47	5.59	5.72	5.85	2.8%
<b>Electricity Demand</b> (billion kilowatthours)														
Residential	89.89	90.38	90.56	90.67	91.32	92.07	93.11	93.74	94.69	95.69	96.90	97.60	98.57	0.5%
Commercial/Other	146.17	148.73	151.31	154.03	156.73	159.46	162.15	164.82	167.52	170.26	172.95	175.58	178.22	1.6%
Industrial	51.52	51.45	51.49	51.64	51.63	51.77	51.88	51.95	52.15	52.22	52.29	52.45	52.62	0.3%
Transportation	0.54	0.54	0.55	0.55	0.56	0.58	0.59	0.59	0.60	0.60	0.61	0.62	0.63	1.1%
Total Sales	288.12	291.10	293.91	296.90	300.24	303.88	307.72	311.10	314.96	318.77	322.75	326.25	330.04	1.0%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.7%
Gross International Exports	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	-2.8%
Gross Interregional Electricity Imports	62.10	63.22	58.54	55.69	53.32	56.94	62.55	64.01	66.34	72.46	77.11	83.08	89.43	2.4%
Gross Interregional Electricity Exports	2.71	1.12	0.79	0.45	0.15	0.20	0.22	0.24	0.27	0.31	0.28	0.23	0.19	-11.2%
Purchases from Combined Heat and Power 8/	11.30	11.35	11.54	11.66	11.74	11.79	11.82	11.88	11.94	11.99	12.05	12.10	12.17	0.6%
Electric Power Sector Generation for Custome	239.19	239.57	246.70	252.24	257.76	257.99	256.43	258.51	260.24	258.13	257.61	255.24	252.79	0.6%
Total Net Energy for Load	310.77	313.92	316.88	320.03	323.56	327.41	331.48	335.05	339.13	343.17	347.38	351.08	355.09	1.0%
<b>Generation by Fuel Type</b> (billion kilowatthours)														
<b>Electric Power Sector</b>														
Coal	32.32	32.35	32.37	32.37	32.37	32.37	32.35	32.35	32.35	32.35	32.35	32.35	32.35	1.1%
Petroleum	0.11	0.11	0.11	0.11	0.11	0.11	0.13	0.12	0.12	0.12	0.12	0.12	0.12	-10.9%
Natural Gas	94.95	94.57	101.29	106.18	111.09	110.38	107.87	109.35	110.38	107.80	102.19	99.08	96.14	0.4%
Nuclear	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	0.5%
Pumped Storage/Other 9/	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	-12.5%
Renewable Sources 10/	71.37	72.10	72.50	73.14	73.75	74.69	75.64	76.24	76.95	77.42	82.50	83.24	83.74	0.8%
Total Generation	241.89	242.27	249.40	254.94	260.46	260.69	259.13	261.21	262.94	260.83	260.31	257.94	255.49	0.6%
Sales to Customers	239.19	239.57	246.70	252.24	257.76	257.99	256.43	258.51	260.24	258.13	257.61	255.24	252.79	0.6%
Generation for Own Use	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	0.2%
Distributed Generation 5/	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	--

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.0%
Petroleum	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	1.8%
Natural Gas	19.73	20.13	20.53	20.96	21.38	21.80	22.22	22.64	23.06	23.47	23.89	24.33	24.78	2.2%
Other Gaseous Fuels	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	-1.6%
Renewable Sources 10/	2.76	2.85	3.08	3.24	3.39	3.52	3.64	3.80	3.90	4.02	4.14	4.28	4.43	3.8%
Other	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	-1.9%
Total	25.55	26.04	26.67	27.26	27.84	28.38	28.92	29.50	30.02	30.55	31.10	31.67	32.27	2.0%
Sales to Utilities	11.30	11.35	11.54	11.66	11.74	11.79	11.82	11.88	11.94	11.99	12.05	12.10	12.17	0.6%
Generation for Own Use	14.26	14.68	15.13	15.60	16.09	16.59	17.10	17.62	18.09	18.56	19.05	19.56	20.10	3.2%
<b>Total Electricity Generation</b>	<b>267.90</b>	<b>268.77</b>	<b>276.53</b>	<b>282.65</b>	<b>288.75</b>	<b>289.53</b>	<b>288.51</b>	<b>291.17</b>	<b>293.42</b>	<b>291.84</b>	<b>291.86</b>	<b>290.06</b>	<b>288.22</b>	<b>0.7%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	13.5	13.5	13.4	13.3	13.3	13.2	13.2	13.3	13.3	13.3	13.4	13.4	13.4	-0.3%
Commercial	11.3	11.2	11.1	11.0	10.9	10.8	10.8	10.9	10.9	10.9	11.0	11.1	11.1	-0.6%
Industrial	9.1	9.0	9.0	8.8	8.8	8.7	8.7	8.7	8.8	8.8	8.8	8.9	8.9	-0.5%
Transportation	10.9	10.8	10.7	10.6	10.5	10.2	10.3	10.3	10.4	10.4	10.5	10.6	10.6	-0.5%
All Sectors Average	11.6	11.5	11.5	11.3	11.3	11.2	11.2	11.2	11.3	11.3	11.4	11.4	11.5	-0.5%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	6.3	6.3	6.3	6.1	6.1	6.4	6.5	6.5	6.6	6.6	6.7	6.7	6.8	-0.3%
Transmission	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.3%
Distribution	4.4	4.4	4.4	4.4	4.4	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.8	-1.2%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	1.2%
Natural Gas	0.82	0.81	0.86	0.89	0.92	0.91	0.88	0.89	0.89	0.87	0.83	0.81	0.79	0.0%
Oil	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	-11.3%
Total	1.16	1.16	1.20	1.23	1.26	1.25	1.22	1.23	1.23	1.21	1.17	1.15	1.13	0.3%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.52	1.53	1.54	1.55	1.57	1.59	1.61	1.62	1.64	1.65	1.66	1.67	1.68	0.6%
Natural Gas	6.19	6.22	6.07	5.76	5.80	5.94	6.08	6.23	6.40	6.50	6.70	6.89	7.09	0.5%
Distillate Fuel Oil	11.02	11.18	11.40	11.46	11.64	11.91	12.28	12.46	12.76	12.95	13.12	13.40	13.52	-0.2%
Residual Fuel Oil	7.74	7.96	8.25	8.41	8.54	8.80	9.00	9.15	9.41	9.74	9.94	10.14	10.24	0.2%
Biomass	2.14	2.14	2.13	2.12	2.11	2.12	2.12	2.14	2.14	2.15	2.15	2.15	2.03	0.4%
<b>Emissions 12/</b>														
Total Carbon (million tons)	23.03	22.91	23.65	24.16	24.66	24.46	24.03	24.13	24.16	23.89	23.25	22.89	22.56	0.1%
Carbon Dioxide (million tons)	84.43	83.99	86.73	88.59	90.41	89.67	88.12	88.46	88.60	87.60	85.26	83.93	82.71	0.1%
Sulfur Dioxide (million tons)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.2%
Nitrogen Oxide (million tons)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	4.2%
Mercury (tons)	0.18	0.19	0.19	0.18	0.17	0.15	0.12	0.12	0.12	0.11	0.11	0.10	0.09	-3.9%

Table 74. Electric Power Projections for EMM Region  
Western Electricity Coordinating Council / California - 13

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 75. Electric Power Projections for EMM Region  
United States

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generating Capacity 1/ (gigawatts)</b>													
<b>Electric Power Sector</b>													
Coal	309.70	309.79	311.37	311.23	313.57	316.00	318.63	320.65	321.03	323.46	323.89	325.67	329.09
Oil and Natural Gas Steam 2/	121.16	119.73	118.77	118.38	118.38	118.36	118.27	93.71	93.62	93.62	93.62	93.62	93.62
Combined Cycle	169.28	176.52	181.04	185.88	189.18	190.00	190.66	192.06	192.06	192.06	192.37	193.18	193.96
Combustion Turbine/Diesel	130.32	130.93	133.28	136.41	137.04	137.42	137.21	129.07	129.26	129.46	129.95	130.40	130.78
Nuclear Power	100.21	100.21	100.47	100.52	100.78	100.87	101.17	101.42	101.65	101.96	102.09	102.37	103.59
Pumped Storage/Other 3/	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46
Fuel Cells	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
Renewable Sources 4/	93.46	96.34	101.16	105.57	106.01	111.63	113.72	114.43	115.43	116.37	117.32	118.21	119.15
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.17	0.27	0.37	0.46	0.55	0.68	0.93	1.20	1.44
Total Capacity	945.59	954.98	967.56	979.45	986.58	996.01	1001.50	973.26	975.06	979.08	981.64	986.12	993.10
<b>Cumulative Planned Additions 6/</b>													
Coal	0.00	0.00	1.54	2.26	4.95	7.71	9.21	9.96	9.96	10.71	10.71	10.71	10.71
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	4.52	9.36	12.66	13.48	14.14	15.54	15.54	15.54	15.54	15.54	15.54
Combustion Turbine/Diesel	0.00	0.00	2.76	3.55	3.70	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
Nuclear Power	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
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	4.83	9.24	9.43	9.46	9.47	9.49	9.50	9.52	9.54	9.56	9.58
Distributed Generation 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
Total Planned Additions	0.00	0.00	13.65	24.40	30.74	34.51	36.68	38.84	38.86	39.63	39.65	39.67	39.69
<b>Cumulative Unplanned Additions 6/</b>													
Coal	0.00	0.00	0.00	0.00	0.00	0.00	1.52	2.98	3.37	5.12	6.81	8.69	12.12
Oil and Natural Gas Steam 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
Combined Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	1.12	1.91
Combustion Turbine/Diesel	0.00	0.00	0.00	2.44	2.91	3.34	3.45	3.53	3.88	4.08	4.58	5.02	5.40
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
Pumped Storage/Other 3/	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
Fuel Cells	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
Renewable Sources 4/	0.00	0.00	0.00	0.00	0.25	5.85	7.92	8.62	9.59	10.52	11.45	12.32	13.25
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.17	0.27	0.37	0.46	0.55	0.68	0.93	1.20	1.44
Total Unplanned Additions	0.00	0.00	0.00	2.44	3.33	9.46	13.26	15.59	17.40	20.40	24.08	28.36	34.84
Cumulative Total Additions	0.00	0.00	13.65	26.84	34.07	43.96	49.94	54.44	56.26	60.03	63.73	68.03	74.53

Table 75. Electric Power Projections for EMM Region  
United States

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Cumulative Retirements 7/</b>													
Coal	0.00	0.00	0.00	0.81	1.17	1.51	1.89	2.08	2.09	2.16	3.42	3.52	3.54
Oil and Natural Gas Steam 3/	0.00	0.00	0.96	1.35	1.35	1.38	1.46	26.02	26.11	26.11	26.11	26.11	26.11
Combined Cycle	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
Combustion Turbine/Diesel	0.00	0.00	0.41	0.51	0.51	0.71	1.03	9.25	9.41	9.41	9.41	9.41	9.41
Nuclear Power	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
Pumped Storage	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
Fuel Cells	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
Renewable Sources 4/	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
Total	0.00	0.00	1.38	2.69	3.05	3.60	4.38	37.37	37.62	37.69	38.95	39.05	39.07
<b>End-Use Sectors 8/</b>													
Coal	4.13	3.99	4.09	4.09	3.97	3.97	4.78	4.99	4.69	4.59	4.90	5.38	5.99
Petroleum	1.15	1.22	1.33	1.33	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
Natural Gas	14.71	14.08	14.59	14.82	15.57	15.83	16.09	16.35	16.63	16.90	17.20	17.51	17.83
Other Gaseous Fuels	2.17	1.76	1.46	1.46	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Renewable Sources 4/	5.96	6.00	6.20	6.34	6.38	6.65	6.80	6.88	7.50	8.00	8.24	8.43	8.64
Other	0.86	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Total	28.97	27.89	28.53	28.90	30.21	30.74	31.97	32.52	33.11	33.79	34.65	35.62	36.76
<b>Electricity Demand (billion kilowatthours)</b>													
Residential	1359.20	1351.44	1391.27	1405.28	1428.07	1449.75	1465.23	1484.48	1456.20	1461.86	1471.85	1488.48	1499.27
Commercial/Other	1275.08	1299.74	1341.40	1352.93	1368.54	1385.54	1409.74	1434.40	1461.84	1492.41	1522.29	1551.72	1579.02
Industrial	1019.15	1001.93	1004.45	1007.93	1003.33	1026.84	1045.15	1051.71	1053.54	1054.21	1057.76	1060.49	1060.66
Transportation	6.27	6.37	6.48	6.57	6.71	6.83	6.94	7.04	7.14	7.22	7.32	7.41	7.50
Total Sales	3659.70	3659.48	3743.60	3772.70	3806.65	3868.96	3927.07	3977.63	3978.72	4015.71	4059.21	4108.10	4146.44
<b>Net Energy for Load (billion kilowatthours) 7/</b>													
Gross International Imports	44.53	42.44	44.63	43.46	38.81	31.40	29.96	33.28	35.80	33.61	26.58	28.29	30.34
Gross International Exports	19.80	24.58	18.81	17.32	16.76	16.47	16.38	16.39	16.42	16.07	15.64	15.34	15.06
Gross Interregional Electricity Imports	300.76	285.70	273.34	296.09	322.23	308.55	317.34	334.73	342.04	350.15	337.84	326.28	314.23
Gross Interregional Electricity Exports	304.30	289.10	276.54	299.86	326.54	312.70	321.73	339.46	347.08	355.48	343.06	331.39	319.22
Purchases from Combined Heat and Power 8/	29.73	29.54	31.29	31.68	33.57	34.40	36.95	37.99	39.15	40.50	42.19	44.06	46.47
Electric Power Sector Generation for Custome	3869.18	3866.46	3962.35	3987.93	4025.49	4091.14	4145.04	4187.65	4178.06	4210.77	4254.20	4301.92	4337.73
Total Net Energy for Load	3920.08	3910.47	4016.26	4041.98	4076.80	4136.34	4191.19	4237.80	4231.56	4263.47	4302.11	4353.83	4394.49
<b>Generation by Fuel Type (billion kilowatthours)</b>													
<b>Electric Power Sector</b>													
Coal	1992.06	1966.04	2002.38	1992.19	2013.59	2033.97	2075.32	2101.12	2116.32	2140.19	2153.75	2173.98	2206.28
Petroleum	116.77	58.93	49.13	48.38	49.08	49.53	49.69	50.78	50.74	50.19	50.77	51.23	51.29
Natural Gas	683.29	732.34	803.86	817.76	815.34	820.00	817.60	822.91	787.41	786.35	806.58	820.77	809.92
Nuclear	781.99	787.22	799.68	799.63	795.18	796.78	799.48	801.65	803.49	806.05	807.03	809.02	816.50
Pumped Storage/Other 9/	4.47	4.29	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Renewable Sources 10/	323.46	350.80	340.70	363.36	385.70	424.29	436.40	444.39	453.32	461.23	469.33	480.21	487.05
Total Generation	3902.03	3899.62	3996.36	4021.92	4059.49	4125.17	4179.09	4221.45	4211.88	4244.61	4288.06	4335.81	4371.64
Sales to Customers	3869.18	3866.46	3962.35	3987.93	4025.49	4091.14	4145.04	4187.65	4178.06	4210.77	4254.20	4301.92	4337.73
Generation for Own Use	32.85	33.17	34.00	33.99	34.00	34.02	34.05	33.80	33.82	33.84	33.87	33.89	33.91
Distributed Generation 5/	0.00	0.00	0.00	0.00	0.07	0.28	0.52	0.55	0.58	0.62	0.67	0.73	0.77

Table 75. Electric Power Projections for EMM Region  
United States

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>End-Use Sectors 8/</b>													
Coal	21.64	21.80	22.07	22.07	21.48	21.48	27.56	29.10	26.84	26.12	28.46	31.98	36.57
Petroleum	5.53	4.00	4.50	4.50	5.85	5.85	5.84	5.86	5.85	5.85	5.86	5.86	5.85
Natural Gas	74.88	75.44	77.66	79.39	86.13	88.07	90.03	92.19	94.23	96.29	98.66	100.94	103.26
Other Gaseous Fuels	12.38	11.57	11.20	11.20	10.39	10.38	10.38	10.41	10.40	10.40	10.41	10.41	10.40
Renewable Sources 10/	34.79	34.98	35.40	35.67	35.77	37.17	38.01	38.40	42.95	46.50	47.88	48.87	49.97
Other	6.35	6.84	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
Total	155.58	154.63	156.57	158.57	165.37	168.69	177.56	181.70	186.01	190.92	197.02	203.80	211.79
Sales to Utilities	29.73	29.54	31.29	31.68	33.57	34.40	36.95	37.99	39.15	40.50	42.19	44.06	46.47
Generation for Own Use	125.85	125.09	125.28	126.89	131.80	134.29	140.62	143.72	146.86	150.42	154.83	159.73	165.32
<b>Total Electricity Generation</b>	<b>4057.61</b>	<b>4054.25</b>	<b>4152.93</b>	<b>4180.50</b>	<b>4224.93</b>	<b>4294.13</b>	<b>4357.17</b>	<b>4403.71</b>	<b>4398.47</b>	<b>4436.15</b>	<b>4485.76</b>	<b>4540.33</b>	<b>4584.21</b>
<b>End-Use Prices</b> (2006 cents per kilowatthour)													
Residential	9.7	10.4	10.4	10.5	10.8	10.7	10.5	10.4	10.3	10.3	10.2	10.3	10.3
Commercial	8.9	9.5	9.3	9.5	9.7	9.5	9.2	9.1	8.9	8.8	8.7	8.7	8.7
Industrial	5.9	6.1	6.3	6.5	6.7	6.6	6.3	6.2	6.0	5.9	5.9	5.9	5.9
Transportation	10.5	10.1	10.1	10.6	10.9	10.6	10.3	10.3	10.0	9.9	9.9	9.9	9.9
All Sectors Average	8.4	8.9	8.9	9.1	9.3	9.2	8.9	8.8	8.7	8.6	8.5	8.5	8.6
<b>Prices by Service Category</b> (2006 cents per kilowatthour)													
Generation	5.4	5.9	6.0	6.2	6.4	6.2	6.0	5.9	5.7	5.5	5.5	5.5	5.6
Transmission	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Distribution	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
<b>Fuel Consumption (quadrillion Btu) 11/</b>													
Coal	20.74	20.48	20.68	20.58	20.80	21.01	21.42	21.67	21.82	22.04	22.18	22.36	22.66
Natural Gas	6.04	6.42	6.97	7.02	6.96	6.89	6.82	6.86	6.60	6.59	6.75	6.85	6.77
Oil	1.24	0.64	0.55	0.54	0.55	0.56	0.56	0.57	0.57	0.56	0.57	0.57	0.57
Total	28.01	27.54	28.20	28.14	28.30	28.45	28.79	29.10	28.98	29.19	29.49	29.78	30.00
<b>Fuel Prices (dollars per million Btu)</b>													
Coal	1.59	1.69	1.73	1.77	1.82	1.84	1.81	1.78	1.76	1.75	1.74	1.72	1.72
Natural Gas	8.44	6.87	6.90	7.24	7.40	6.96	6.65	6.49	6.25	6.06	5.93	5.88	5.93
Distillate Fuel Oil	12.62	13.35	14.96	17.35	14.25	13.62	12.92	12.19	11.52	11.26	10.67	10.26	10.27
Residual Fuel Oil	7.40	8.17	8.60	10.50	9.98	9.45	8.97	8.52	8.13	7.87	7.41	7.03	7.05
Biomass	1.88	1.87	1.88	1.88	1.88	1.88	1.88	1.90	1.91	1.92	2.09	2.10	2.11
<b>Emissions 12/</b>													
Total Carbon (million tons)	720.45	704.43	717.04	714.79	720.17	725.15	736.04	744.14	744.25	750.55	756.94	763.99	771.29
Carbon Dioxide (million tons)	2641.67	2582.92	2629.13	2620.88	2640.63	2658.87	2698.83	2728.51	2728.90	2752.00	2775.46	2801.30	2828.08
Sulfur Dioxide (million tons)	10.22	9.39	9.34	8.53	7.52	6.43	5.82	5.32	5.09	4.96	4.68	4.51	4.35
Nitrogen Oxide (million tons)	3.64	3.41	3.53	3.48	2.36	2.33	2.35	2.34	2.35	2.36	2.11	2.11	2.10
Mercury (tons)	51.72	50.37	50.77	48.43	46.58	37.24	36.92	33.20	33.82	27.63	24.84	23.36	22.87

Table 75. Electric Power Projections for EMM Region  
United States

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generating Capacity 1/ (gigawatts)</b>														
<b>Electric Power Sector</b>														
Coal	335.17	338.65	343.07	349.29	354.46	360.61	366.71	372.21	378.06	384.65	391.55	399.09	406.10	1.1%
Oil and Natural Gas Steam 2/	93.62	93.46	93.34	93.23	93.23	93.23	93.14	93.03	93.03	93.01	93.01	93.01	92.94	-1.1%
Combined Cycle	194.62	195.66	196.68	197.76	199.26	201.71	203.99	205.72	206.64	207.62	208.16	208.55	209.96	0.7%
Combustion Turbine/Diesel	130.86	131.10	132.07	133.57	135.51	137.88	140.61	143.79	147.60	152.08	155.56	160.27	164.68	1.0%
Nuclear Power	105.59	107.99	110.87	110.87	112.13	113.24	114.32	115.68	116.80	117.34	117.34	116.02	114.94	0.6%
Pumped Storage/Other 3/	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	21.46	0.0%
Fuel Cells	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	--
Renewable Sources 4/	120.01	121.31	123.62	124.15	124.67	125.81	126.98	128.26	128.91	129.37	131.09	131.55	132.54	1.3%
Distributed Generation 5/	1.82	2.23	2.70	3.29	3.92	4.61	5.23	5.87	6.58	7.29	8.10	8.93	9.77	--
Total Capacity	1003.15	1011.87	1023.81	1033.62	1044.63	1058.55	1072.45	1086.02	1099.07	1112.81	1126.27	1138.89	1152.38	0.8%
<b>Cumulative Planned Additions 6/</b>														
Coal	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	--
Oil and Natural Gas Steam 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	--
Combined Cycle	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	--
Combustion Turbine/Diesel	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	--
Nuclear Power	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	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	9.60	9.62	9.64	9.66	9.68	9.71	9.73	9.75	9.77	9.79	9.82	9.84	9.86	--
Distributed Generation 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	--
Total Planned Additions	39.70	39.73	39.75	39.77	39.79	39.81	39.84	39.86	39.88	39.90	39.92	39.95	39.97	--
<b>Cumulative Unplanned Additions 6/</b>														
Coal	18.26	21.73	26.27	32.49	37.66	43.96	50.06	55.56	61.41	68.02	74.92	82.46	89.47	--
Oil and Natural Gas Steam 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	--
Combined Cycle	2.56	3.61	4.62	5.70	7.20	9.65	11.93	13.66	14.58	15.56	16.11	16.49	17.90	--
Combustion Turbine/Diesel	5.48	5.73	6.69	8.19	10.14	12.50	15.23	18.42	22.22	26.71	30.32	35.08	39.54	--
Nuclear Power	2.72	5.12	8.00	8.00	9.26	10.37	11.46	12.81	13.94	14.47	14.47	14.98	16.56	--
Pumped Storage/Other 3/	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	--
Fuel Cells	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	--
Renewable Sources 4/	14.08	15.36	17.65	18.16	18.65	19.78	20.92	22.18	22.81	23.24	24.94	25.38	26.35	--
Distributed Generation 5/	1.82	2.23	2.70	3.29	3.92	4.61	5.23	5.87	6.58	7.29	8.10	8.93	9.77	--
Total Unplanned Additions	44.92	53.78	65.94	75.83	86.84	100.88	114.84	128.50	141.53	155.28	168.86	183.32	199.59	--
Cumulative Total Additions	84.63	93.50	105.69	115.60	126.63	140.69	154.67	168.36	181.41	195.19	208.79	223.27	239.56	--



Table 75. Electric Power Projections for EMM Region  
United States

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Cumulative Retirements 7/</b>														
Coal	3.59	3.59	3.71	3.71	3.71	3.85	3.85	3.85	3.85	3.87	3.87	3.87	3.87	--
Oil and Natural Gas Steam 3/	26.11	26.27	26.39	26.50	26.51	26.51	26.59	26.70	26.70	26.72	26.72	26.72	26.79	--
Combined Cycle	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	--
Combustion Turbine/Diesel	9.41	9.41	9.41	9.41	9.41	9.41	9.41	9.41	9.41	9.41	9.55	9.59	9.65	--
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	4.48	--
Pumped Storage	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	--
Fuel Cells	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	--
Renewable Sources 4/	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	39.12	39.28	39.52	39.63	39.64	39.78	39.87	39.98	39.98	40.02	40.15	42.02	44.81	--
<b>End-Use Sectors 8/</b>														
Coal	6.53	6.35	6.28	7.42	7.42	7.12	6.61	6.60	7.11	7.24	7.62	7.87	7.97	2.9%
Petroleum	1.93	1.90	1.90	2.17	2.17	2.17	2.10	2.10	2.10	2.13	2.13	2.13	2.13	2.4%
Natural Gas	18.17	18.49	18.83	19.20	19.54	19.88	20.21	20.55	20.90	21.26	21.62	22.00	22.41	2.0%
Other Gaseous Fuels	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	-0.1%
Renewable Sources 4/	9.10	9.92	10.85	10.94	12.15	13.20	14.41	15.20	15.45	15.76	16.12	16.46	16.72	4.4%
Other	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.0%
Total	38.31	39.23	40.42	42.30	43.86	44.94	45.91	47.04	48.15	48.96	50.06	51.05	51.80	2.6%
<b>Electricity Demand (billion kilowatthours)</b>														
Residential	1514.17	1528.29	1539.82	1549.11	1565.25	1582.48	1604.39	1620.13	1640.79	1661.86	1685.83	1701.93	1722.29	1.0%
Commercial/Other	1606.43	1633.70	1661.36	1690.54	1718.71	1746.66	1774.42	1802.27	1829.96	1858.19	1885.67	1913.48	1941.10	1.7%
Industrial	1059.72	1055.65	1052.22	1050.54	1047.30	1044.58	1042.57	1041.16	1040.75	1040.17	1037.16	1034.25	1032.94	0.1%
Transportation	7.59	7.68	7.77	7.86	7.94	8.15	8.22	8.30	8.39	8.47	8.55	8.64	8.73	1.3%
Total Sales	4187.90	4225.31	4261.17	4298.04	4339.20	4381.87	4429.60	4471.86	4519.88	4568.69	4617.21	4658.30	4705.05	1.1%
<b>Net Energy for Load (billion kilowatthours) 7/</b>														
Gross International Imports	29.29	31.25	27.38	27.80	27.59	28.11	28.79	27.90	27.90	27.90	27.90	33.32	34.65	-0.8%
Gross International Exports	14.79	14.46	14.22	14.01	13.70	13.29	12.59	12.11	12.11	12.11	12.11	12.11	12.11	-2.9%
Gross Interregional Electricity Imports	299.90	281.20	266.49	256.47	254.42	257.41	263.53	262.78	258.39	253.49	256.14	252.99	256.00	-0.5%
Gross Interregional Electricity Exports	304.73	285.78	270.89	260.80	258.84	261.89	268.14	267.37	262.89	257.89	260.59	257.38	260.45	-0.4%
Purchases from Combined Heat and Power 8/	49.19	51.90	56.00	62.48	69.33	70.52	72.01	73.69	75.28	76.09	77.56	78.70	79.23	4.2%
Electric Power Sector Generation for Custome	4379.53	4413.85	4451.19	4483.02	4519.65	4562.87	4610.75	4654.11	4703.45	4754.03	4804.00	4840.90	4888.68	1.0%
Total Net Energy for Load	4438.39	4477.96	4515.94	4554.97	4598.45	4643.73	4694.35	4738.99	4790.01	4841.50	4892.89	4936.42	4986.00	1.0%
<b>Generation by Fuel Type (billion kilowatthours)</b>														
<b>Electric Power Sector</b>														
Coal	2251.42	2286.51	2318.66	2362.53	2399.37	2444.71	2492.19	2533.45	2575.72	2623.66	2672.31	2723.31	2786.84	1.5%
Petroleum	51.50	51.90	52.67	53.18	53.75	54.21	54.61	54.88	55.21	55.88	56.43	56.77	56.84	-0.2%
Natural Gas	782.15	754.26	722.74	701.82	689.79	672.33	658.53	643.78	638.90	633.46	626.01	608.47	602.95	-0.8%
Nuclear	828.96	846.40	868.12	874.12	882.90	891.59	900.35	910.66	920.04	925.41	926.40	927.96	917.43	0.6%
Pumped Storage/Other 9/	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	-7.9%
Renewable Sources 10/	498.82	508.13	522.38	524.75	527.22	533.40	538.43	544.71	546.95	548.99	556.23	557.76	557.94	2.0%
Total Generation	4413.46	4447.80	4485.17	4517.00	4553.63	4596.84	4644.72	4688.09	4737.42	4788.01	4837.97	4874.87	4922.60	1.0%
Sales to Customers	4379.53	4413.85	4451.19	4483.02	4519.65	4562.87	4610.75	4654.11	4703.45	4754.03	4804.00	4840.90	4888.68	1.0%
Generation for Own Use	33.93	33.95	33.98	33.98	33.98	33.98	33.98	33.98	33.98	33.98	33.97	33.97	33.92	0.1%
Distributed Generation 5/	0.88	1.00	1.14	1.34	1.55	1.78	1.99	2.21	2.45	2.69	2.98	3.28	3.59	--

Table 75. Electric Power Projections for EMM Region  
United States

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Sectors 8/</b>														
Coal	40.60	39.24	38.69	47.21	47.21	44.93	41.19	41.12	44.92	45.82	48.66	50.58	51.27	3.6%
Petroleum	6.01	6.52	7.30	7.89	8.76	8.99	9.32	9.33	9.24	9.56	9.47	9.47	9.47	3.7%
Natural Gas	105.65	108.16	110.76	113.41	116.12	118.71	121.34	123.89	126.48	129.14	131.84	134.67	137.66	2.5%
Other Gaseous Fuels	10.39	10.39	10.39	10.39	10.40	10.40	10.42	10.42	10.42	10.42	10.42	10.42	10.42	-0.4%
Renewable Sources 10/	52.86	58.49	65.05	65.68	74.61	81.35	89.26	94.02	94.68	95.70	96.92	97.96	98.19	4.4%
Other	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	-0.7%
Total	221.25	228.54	237.93	250.32	262.85	270.13	277.27	284.54	291.49	296.38	303.05	308.85	312.76	3.0%
Sales to Utilities	49.19	51.90	56.00	62.48	69.33	70.52	72.01	73.69	75.28	76.09	77.56	78.70	79.23	4.2%
Generation for Own Use	172.06	176.64	181.93	187.84	193.52	199.61	205.25	210.85	216.21	220.29	225.50	230.14	233.53	2.6%
<b>Total Electricity Generation</b>	<b>4635.58</b>	<b>4677.34</b>	<b>4724.24</b>	<b>4768.66</b>	<b>4818.02</b>	<b>4868.76</b>	<b>4923.98</b>	<b>4974.83</b>	<b>5031.37</b>	<b>5087.08</b>	<b>5144.01</b>	<b>5187.00</b>	<b>5238.94</b>	<b>1.1%</b>
<b>End-Use Prices</b>														
(2006 cents per kilowatthour)														
Residential	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.5	0.0%
Commercial	8.8	8.8	8.7	8.7	8.7	8.7	8.7	8.8	8.8	8.8	8.9	8.9	8.9	-0.2%
Industrial	5.9	5.9	5.9	5.8	5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.0	6.0	-0.1%
Transportation	10.0	10.0	9.9	9.8	9.8	9.8	9.8	9.9	9.9	9.9	10.0	10.0	10.1	0.0%
All Sectors Average	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.7	8.7	8.7	8.8	8.8	8.8	0.0%
<b>Prices by Service Category</b>														
(2006 cents per kilowatthour)														
Generation	5.6	5.6	5.6	5.5	5.6	5.6	5.7	5.7	5.7	5.7	5.8	5.8	5.9	-0.1%
Transmission	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.1%
Distribution	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	-0.2%
<b>Fuel Consumption (quadrillion Btu) 11/</b>														
Coal	23.07	23.39	23.67	24.05	24.38	24.76	25.17	25.51	25.86	26.25	26.63	27.02	27.55	1.2%
Natural Gas	6.55	6.33	6.09	5.93	5.83	5.68	5.56	5.45	5.40	5.36	5.31	5.18	5.13	-0.9%
Oil	0.57	0.58	0.59	0.59	0.60	0.60	0.61	0.61	0.61	0.62	0.62	0.63	0.63	-0.1%
Total	30.19	30.29	30.34	30.57	30.80	31.04	31.34	31.57	31.87	32.23	32.57	32.83	33.31	0.8%
<b>Fuel Prices (dollars per million Btu)</b>														
Coal	1.71	1.71	1.72	1.72	1.72	1.73	1.73	1.74	1.74	1.75	1.76	1.77	1.78	0.2%
Natural Gas	5.98	6.04	5.95	5.81	5.92	6.02	6.14	6.26	6.38	6.44	6.66	6.80	6.93	0.0%
Distillate Fuel Oil	10.42	10.57	10.69	10.80	10.93	11.14	11.39	11.59	11.86	12.04	12.25	12.50	12.71	-0.2%
Residual Fuel Oil	7.19	7.35	7.50	7.63	7.73	7.91	8.09	8.25	8.44	8.56	8.75	8.89	9.04	0.4%
Biomass	2.13	2.16	2.13	2.13	2.13	2.12	2.12	2.24	2.24	2.24	2.24	2.25	2.21	0.7%
<b>Emissions 12/</b>														
Total Carbon (million tons)	779.56	785.28	789.62	798.24	805.97	814.76	824.74	832.76	841.91	852.51	862.79	871.72	885.98	1.0%
Carbon Dioxide (million tons)	2858.39	2879.37	2895.28	2926.89	2955.22	2987.44	3024.04	3053.45	3087.01	3125.88	3163.57	3196.32	3248.60	1.0%
Sulfur Dioxide (million tons)	3.99	3.94	3.77	3.66	3.65	3.61	3.64	3.66	3.67	3.63	3.65	3.62	3.71	-3.8%
Nitrogen Oxide (million tons)	2.11	2.11	2.12	2.12	2.12	2.13	2.14	2.14	2.15	2.15	2.16	2.16	2.17	-1.9%
Mercury (tons)	21.14	20.50	19.46	19.43	18.41	17.46	17.22	17.14	16.75	16.43	16.26	15.82	15.31	-4.8%

Table 75. Electric Power Projections for EMM Region  
United States

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand. Includes electric utilities, small power producers, and exempt wholesale generators.

2/ Includes oil-, gas-, and dual-fired capacity.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Primarily peak-load capacity fueled by natural gas.

6/ Cumulative additions after December 31, 2006.

7/ Generation to meet system load by source.

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/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

10/ Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

11/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

12/ Estimated emissions from utilities and nonutilities (excluding combined heat and power).

O&M = Operation and maintenance.

EMM = Electricity market module.

-- = Not applicable.

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

Sources: 2006 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Other 2006 and projections: NewGen Data and Analysis, RDI Consulting/FT Energy (Boulder, CO, August 2000) and EIA, AEO2008 National Energy

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>East Central Area Reliability Coordination Agreement</b>													
Coal	515.04	511.48	516.34	510.67	515.57	523.08	531.02	539.22	544.72	551.86	550.27	554.85	558.69
Petroleum	6.40	5.33	3.26	3.19	3.35	3.32	3.60	3.69	3.72	3.40	3.13	3.14	3.13
Natural Gas	21.92	18.19	35.35	38.00	42.32	40.08	39.96	40.16	39.73	40.20	41.31	41.63	41.90
Nuclear	61.65	58.05	61.23	61.08	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02
Pumped Storage/Other 1/	-1.13	-1.41	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Renewables 2/	6.20	6.22	5.76	6.48	7.20	7.36	7.28	7.38	7.38	7.34	7.35	7.39	7.31
Total	610.08	597.85	620.94	618.42	628.46	633.87	641.88	650.48	655.58	662.82	662.09	667.04	671.05
<b>Electric Reliability Council of Texas</b>													
Coal	115.26	113.22	110.63	109.45	109.50	112.39	119.75	130.23	131.43	131.95	130.52	130.84	133.24
Petroleum	1.41	1.68	0.65	0.63	0.70	0.67	0.73	0.93	0.95	0.96	1.40	1.45	1.50
Natural Gas	131.04	133.81	145.83	146.14	146.08	148.60	146.73	141.53	138.64	138.80	141.83	144.71	144.09
Nuclear	38.23	41.26	38.75	38.67	38.48	38.48	38.48	38.81	38.81	40.01	40.01	40.01	41.22
Pumped Storage/Other 1/	1.43	1.84	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Renewables 2/	5.07	6.42	10.75	12.74	13.46	13.48	13.48	13.48	14.46	15.17	16.38	16.35	16.42
Total	292.44	298.24	306.67	307.69	308.32	313.74	319.31	325.13	324.46	327.08	330.36	333.60	336.73
<b>Mid-Atlantic Area Council</b>													
Coal	130.10	129.50	132.60	132.70	133.87	125.56	128.71	126.28	126.10	126.32	128.96	129.71	132.28
Petroleum	10.55	2.29	3.26	3.23	3.28	3.41	3.42	3.47	3.49	3.51	3.68	3.73	3.76
Natural Gas	27.22	31.20	29.49	33.46	33.95	20.82	22.08	22.40	19.17	18.18	18.90	20.67	22.50
Nuclear	108.41	109.56	108.28	108.02	107.71	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42
Pumped Storage/Other 1/	0.99	0.96	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Renewables 2/	6.43	7.42	8.51	8.63	8.89	21.66	23.05	27.04	28.81	31.99	32.58	36.39	38.75
Total	283.69	280.92	282.98	286.88	288.53	280.71	286.51	288.44	286.82	289.25	293.40	299.79	306.59
<b>Mid-America Interconnected Network</b>													
Coal	176.35	173.71	177.08	177.91	182.92	188.73	194.99	201.88	205.35	206.88	207.48	206.60	206.10
Petroleum	0.94	0.77	1.49	1.49	1.34	1.35	1.39	1.35	1.28	1.05	1.04	1.06	1.03
Natural Gas	15.33	12.86	17.92	27.53	32.98	30.02	28.47	27.49	21.63	21.42	20.90	20.47	16.87
Nuclear	112.50	118.21	117.39	116.99	116.26	116.32	116.78	117.06	117.06	117.06	117.06	117.06	117.06
Pumped Storage/Other 1/	0.19	0.47	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Renewables 2/	3.90	3.26	6.01	7.50	8.60	13.38	16.08	17.84	20.31	22.27	24.49	27.72	30.11
Total	309.21	309.28	320.15	331.69	342.36	350.08	357.97	365.90	365.91	368.94	371.25	373.18	371.44
<b>Mid-Continent Area Power Pool</b>													
Coal	119.29	116.11	120.81	121.34	122.41	122.25	124.18	125.07	127.00	129.29	131.93	134.40	136.90
Petroleum	0.97	0.68	0.77	0.83	0.91	0.91	0.72	0.71	0.69	0.60	0.61	0.62	0.62
Natural Gas	4.46	4.32	1.74	2.08	3.08	3.03	3.10	3.22	3.00	3.34	3.46	3.68	3.72
Nuclear	24.89	25.57	23.96	23.94	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69
Pumped Storage/Other 1/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Renewables 2/	12.09	13.90	18.71	21.29	22.83	23.71	23.67	23.62	23.60	23.60	23.61	23.62	23.61
Total	161.97	160.84	166.27	169.75	173.21	173.88	175.65	176.60	178.28	180.81	183.60	186.31	188.86

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Northeast Power Coordinating Council/ New York													
Coal	17.08	17.88	18.65	17.87	17.16	17.24	16.86	16.69	16.43	16.32	16.52	16.61	16.79
Petroleum	24.24	6.96	8.40	8.61	8.61	8.67	8.72	8.99	8.94	8.96	9.01	9.02	9.00
Natural Gas	32.22	41.77	48.28	51.48	51.19	57.56	59.72	59.43	56.47	54.29	59.09	59.41	56.80
Nuclear	47.92	48.05	46.62	46.39	45.91	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58
Pumped Storage/Other 1/	0.00	0.02	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Renewables 2/	27.50	28.32	26.48	27.16	27.90	27.99	28.57	28.82	29.15	29.45	29.54	29.64	29.66
Total	148.95	143.00	148.81	151.90	151.15	158.42	160.82	160.88	157.94	155.98	161.11	161.64	159.20
Northeast Power Coordinating Council/New England													
Coal	22.98	22.30	19.56	19.71	20.08	20.48	20.84	21.21	21.59	21.95	22.32	22.68	23.06
Petroleum	11.55	3.39	2.69	2.68	2.71	2.66	2.66	2.52	2.53	2.54	2.52	2.50	2.50
Natural Gas	45.51	46.99	59.37	57.34	57.25	55.27	55.83	56.86	56.67	57.69	56.32	55.53	55.51
Nuclear	29.09	31.09	30.40	30.30	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16	30.16
Pumped Storage/Other 1/	0.90	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Renewables 2/	13.53	14.06	10.07	10.31	10.79	19.80	19.86	19.96	20.05	20.18	20.33	20.47	20.60
Total	123.57	118.63	123.09	121.34	121.99	129.37	130.35	131.72	132.01	133.53	132.67	132.37	132.86
Southeastern Electric Reliability Council/Florida													
Coal	60.51	61.57	72.89	72.47	72.71	72.95	73.23	73.37	74.80	82.87	90.65	99.14	108.21
Petroleum	37.01	22.76	12.81	12.98	12.95	13.09	13.38	13.73	13.79	13.66	13.76	14.05	13.88
Natural Gas	80.56	93.34	72.95	75.86	78.05	83.63	86.59	90.46	90.45	87.02	83.70	80.76	77.54
Nuclear	28.76	31.43	30.48	30.34	30.09	30.09	30.09	30.09	30.09	30.09	30.09	30.09	30.09
Pumped Storage/Other 1/	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Renewables 2/	2.82	2.91	2.87	2.83	2.76	4.05	4.04	4.18	4.35	4.38	4.79	4.82	4.61
Total	210.81	213.15	193.15	195.63	197.72	204.95	208.48	212.97	214.64	219.16	224.15	230.01	235.48
Southeastern Electric Reliability Council/excluding Florida													
Coal	457.27	461.70	465.30	462.87	468.64	471.68	473.62	473.12	473.69	476.76	480.20	482.96	486.38
Petroleum	9.81	3.55	5.69	5.63	5.73	5.75	5.16	5.36	5.36	5.44	5.46	5.42	5.47
Natural Gas	101.65	109.85	149.95	154.24	139.62	151.38	151.19	153.84	142.78	143.21	146.52	148.85	146.72
Nuclear	251.51	249.34	258.38	260.27	258.34	258.40	260.23	261.79	263.64	264.99	265.96	267.96	274.23
Pumped Storage/Other 1/	-1.07	-1.36	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35
Renewables 2/	36.67	29.17	36.66	37.20	38.20	38.39	38.33	38.69	40.27	41.24	42.22	44.14	44.98
Total	855.83	852.25	913.64	917.85	908.19	923.25	926.18	930.45	923.38	929.27	938.01	946.98	955.43
Southwest Power Pool													
Coal	142.56	140.01	140.55	139.35	139.53	142.11	144.21	145.34	145.78	146.21	146.65	147.10	147.51
Petroleum	1.60	0.24	2.02	1.01	1.12	1.15	1.17	1.22	1.22	1.22	1.22	1.20	1.20
Natural Gas	52.88	56.17	39.52	36.98	39.81	40.70	41.00	40.19	38.25	36.96	39.79	41.67	41.17
Nuclear	8.82	9.35	9.37	9.32	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28
Pumped Storage/Other 1/	0.29	0.05	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04
Renewables 2/	8.20	6.45	9.68	10.26	10.67	10.69	10.70	10.70	10.70	10.71	10.71	10.72	10.72
Total	214.36	212.26	201.10	196.88	200.37	203.90	206.32	206.69	205.20	204.35	207.61	209.92	209.86
Western Electricity Coordinating Council/Northwest Power Pool Area													
Coal	81.97	74.92	77.80	77.90	78.60	79.11	79.35	79.60	79.84	80.09	80.35	79.54	79.83
Petroleum	0.54	0.50	0.26	0.26	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.31
Natural Gas	23.78	24.58	32.91	31.57	31.57	31.57	30.21	29.46	29.46	29.46	30.22	29.47	28.57
Nuclear	8.24	9.33	8.90	8.93	8.91	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97
Pumped Storage/Other 1/	0.45	0.51	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Renewables 2/	125.43	146.08	130.33	139.89	151.30	156.44	161.66	161.67	162.55	162.55	162.55	163.73	163.92
Total	240.41	255.92	250.32	258.67	270.78	276.49	280.61	280.11	281.23	281.49	282.55	282.14	281.72

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Western Electricity Coordinating Council/Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area													
Coal	120.75	117.08	122.94	122.62	124.84	130.19	136.21	136.74	137.18	137.28	135.43	137.06	144.76
Petroleum	0.12	0.15	0.51	0.50	0.52	0.54	0.60	0.58	0.58	0.58	0.58	0.60	0.68
Natural Gas	64.21	64.92	77.14	88.37	81.71	83.37	79.97	84.66	81.72	82.58	83.65	80.85	74.91
Nuclear	18.73	17.43	22.73	22.37	22.37	22.37	22.67	22.67	22.67	22.67	22.67	22.67	22.67
Pumped Storage/Other 1/	0.14	0.18	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13
Renewables 2/	14.74	16.23	16.59	19.04	20.02	20.52	20.86	20.87	20.88	20.89	22.86	23.21	23.76
Total	218.70	215.98	239.78	252.76	249.32	256.85	260.18	265.39	262.90	263.88	265.06	264.25	266.64
Western Electricity Coordinating Council/California													
Coal	30.88	24.62	27.01	27.11	27.55	27.98	32.12	32.14	32.18	32.20	32.23	32.26	32.28
Petroleum	2.06	1.86	0.07	0.07	0.08	0.08	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Natural Gas	77.21	88.03	87.04	68.33	71.05	67.00	65.43	65.79	62.01	65.69	73.26	85.30	91.73
Nuclear	43.23	38.54	43.18	43.02	42.95	42.99	43.10	43.10	43.10	43.10	43.10	43.10	43.10
Pumped Storage/Other 1/	0.85	0.82	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Renewables 2/	58.99	68.48	56.53	58.28	61.24	65.00	66.99	68.26	68.92	69.58	69.96	70.07	70.66
Total	213.21	222.36	213.86	196.85	202.93	203.28	208.22	209.89	206.81	211.18	219.17	231.34	238.38

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>East Central Area Reliability Coordination Agreement</b>														
Coal	562.26	566.11	568.02	567.58	567.66	568.09	567.62	568.46	568.31	568.39	568.19	566.27	566.26	0.4%
Petroleum	3.16	3.16	3.40	3.43	3.42	3.42	3.41	3.41	3.51	3.60	3.61	3.68	3.68	-1.5%
Natural Gas	43.01	38.49	38.52	38.95	40.90	41.79	43.83	44.09	45.60	46.84	47.97	48.55	52.44	4.5%
Nuclear	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	61.02	0.2%
Pumped Storage/Other 1/	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.4%
Renewables 2/	7.43	7.26	7.05	7.26	7.34	7.24	7.24	7.33	7.34	7.25	7.21	7.21	7.03	0.5%
Total	675.89	675.05	677.02	677.24	679.35	680.56	682.12	683.33	684.78	686.10	687.03	685.77	689.47	0.6%
<b>Electric Reliability Council of Texas</b>														
Coal	148.56	149.36	156.98	156.83	158.36	165.89	175.44	181.48	188.39	194.34	199.72	210.39	224.56	2.9%
Petroleum	1.66	1.67	1.75	1.75	1.77	1.84	1.93	1.99	2.06	2.12	2.17	2.27	2.27	1.3%
Natural Gas	132.27	133.87	129.48	131.70	132.12	127.07	121.71	119.87	117.45	115.92	115.05	108.55	99.70	-1.2%
Nuclear	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	41.22	0.0%
Pumped Storage/Other 1/	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	-13.4%
Renewables 2/	17.10	17.45	17.85	18.00	18.18	18.38	18.60	18.80	19.02	19.25	19.46	19.66	19.88	4.8%
Total	341.09	343.88	347.59	349.85	352.06	354.88	359.43	363.95	368.76	373.48	378.29	382.78	388.34	1.1%
<b>Mid-Atlantic Area Council</b>														
Coal	135.74	139.30	140.08	140.18	139.05	138.64	138.78	139.07	143.73	149.02	153.81	163.36	167.56	1.1%
Petroleum	3.76	3.79	3.79	3.79	3.78	3.78	3.76	3.76	3.76	3.75	3.77	3.76	3.76	2.1%
Natural Gas	19.97	19.60	17.38	17.86	17.90	17.93	17.97	18.04	18.07	18.07	18.07	18.33	20.74	-1.7%
Nuclear	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	108.42	106.75	103.43	-0.2%
Pumped Storage/Other 1/	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	-0.6%
Renewables 2/	42.16	44.44	46.62	46.86	47.69	48.17	48.49	48.93	49.22	49.40	49.76	50.10	50.69	8.3%
Total	310.99	316.56	317.33	318.21	318.00	318.16	318.69	319.55	324.58	330.10	335.33	343.84	347.77	0.9%
<b>Mid-America Interconnected Network</b>														
Coal	201.02	199.50	194.75	194.67	196.90	195.78	197.47	196.88	196.39	195.65	195.80	196.40	205.44	0.7%
Petroleum	1.00	1.00	1.03	1.03	1.06	1.13	1.14	1.14	1.15	1.15	1.13	1.14	1.05	1.3%
Natural Gas	16.83	15.06	15.56	15.58	15.66	14.24	14.24	14.24	14.24	14.25	14.33	14.25	15.51	0.8%
Nuclear	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	110.24	-0.3%
Pumped Storage/Other 1/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	-2.3%
Renewables 2/	34.10	37.38	39.82	40.94	40.48	43.66	45.93	47.93	48.11	48.34	48.85	48.90	46.98	11.8%
Total	370.28	370.27	368.50	369.55	371.44	372.15	376.12	377.53	377.28	376.81	377.57	378.18	379.68	0.9%
<b>Mid-Continent Area Power Pool</b>														
Coal	139.14	140.13	140.69	140.81	140.63	140.57	140.78	140.71	140.75	140.79	140.98	140.73	140.74	0.8%
Petroleum	0.62	0.66	0.74	0.74	0.83	0.84	0.85	0.83	0.83	0.83	0.83	0.82	0.82	0.8%
Natural Gas	3.47	3.25	3.54	4.63	3.56	3.35	3.36	3.36	2.86	2.96	4.74	3.30	3.42	-1.0%
Nuclear	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	23.69	-0.3%
Pumped Storage/Other 1/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.0%
Renewables 2/	23.69	23.68	23.58	23.52	23.54	23.53	23.54	23.56	23.57	23.57	23.56	23.48	23.48	2.2%
Total	190.92	191.74	192.56	193.73	192.59	192.33	192.57	192.51	192.06	192.20	194.19	192.44	192.57	0.8%

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
Northeast Power Coordinating Council/ New York														
Coal	18.39	18.64	19.51	21.13	22.79	24.96	26.80	28.56	30.42	33.50	36.17	38.40	49.40	4.3%
Petroleum	9.00	8.96	8.97	8.92	8.90	8.86	8.84	8.80	8.69	8.61	8.51	8.42	8.27	0.7%
Natural Gas	55.39	53.25	53.94	52.57	51.70	50.87	50.81	49.63	47.73	45.43	43.40	41.59	38.49	-0.3%
Nuclear	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	46.58	37.22	-1.1%
Pumped Storage/Other 1/	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	12.4%
Renewables 2/	29.58	29.67	29.69	29.65	29.65	29.69	29.69	29.74	29.78	29.78	29.83	29.82	29.87	0.2%
Total	159.32	157.48	159.07	159.22	159.99	161.34	163.09	163.68	163.58	164.28	164.86	165.19	163.63	0.6%
Northeast Power Coordinating Council/New England														
Coal	23.42	23.79	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	24.15	0.3%
Petroleum	2.51	2.48	2.48	2.45	2.43	2.39	2.38	2.37	2.37	2.35	2.37	2.35	2.34	-1.5%
Natural Gas	56.53	56.73	59.15	60.50	62.17	62.32	62.26	61.65	61.56	60.87	61.68	60.61	58.56	0.9%
Nuclear	30.16	30.16	30.16	30.16	30.16	30.16	30.16	33.31	34.15	37.54	38.41	38.44	42.64	1.3%
Pumped Storage/Other 1/	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0%
Renewables 2/	20.65	20.68	20.67	20.72	20.71	20.72	20.72	20.78	20.81	20.98	21.02	21.06	21.24	1.7%
Total	134.32	134.90	137.69	139.09	140.72	140.85	140.79	143.39	144.17	147.02	148.77	147.74	150.06	1.0%
Southeastern Electric Reliability Council/Florida														
Coal	117.93	126.89	135.91	144.77	144.72	144.65	144.65	144.65	144.65	147.17	153.74	162.13	164.10	4.2%
Petroleum	13.81	13.86	13.89	13.86	13.86	13.84	13.83	13.83	13.81	13.83	13.85	13.83	13.86	-2.0%
Natural Gas	73.81	71.98	66.18	64.48	62.47	59.58	57.17	55.73	55.46	57.42	57.67	55.31	54.15	-2.2%
Nuclear	30.09	30.09	30.09	30.09	30.09	32.51	46.20	54.96	62.13	70.65	72.64	75.96	82.64	4.1%
Pumped Storage/Other 1/	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.0%
Renewables 2/	4.77	4.77	4.82	4.78	4.84	4.91	4.91	4.91	4.90	4.78	4.82	4.55	4.15	1.5%
Total	241.57	248.75	252.07	259.20	264.63	270.43	276.81	282.56	290.83	297.22	304.25	313.22	320.36	1.7%
Southeastern Electric Reliability Council/excluding Florid														
Coal	486.67	490.23	491.75	510.06	524.42	541.80	556.84	572.11	583.89	598.35	609.77	619.06	628.85	1.3%
Petroleum	5.34	5.43	5.50	5.76	5.92	6.00	6.03	6.03	6.04	6.37	6.57	6.63	6.65	2.7%
Natural Gas	140.29	127.38	117.44	96.14	93.67	93.54	93.26	92.46	95.35	95.17	95.11	92.26	95.16	-0.6%
Nuclear	286.69	304.13	325.85	331.85	333.21	333.21	333.21	333.21	333.21	333.21	333.21	333.21	331.29	1.2%
Pumped Storage/Other 1/	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	2.3%
Renewables 2/	46.93	48.27	47.77	47.59	47.38	47.67	47.65	47.50	47.59	47.76	47.97	48.08	48.29	2.1%
Total	963.56	973.08	985.97	989.07	1002.29	1019.95	1034.74	1049.09	1063.89	1078.71	1090.50	1097.14	1108.15	1.1%
Southwest Power Pool														
Coal	151.19	155.96	161.68	165.96	170.25	174.93	179.20	183.39	187.04	189.76	193.73	193.77	194.80	1.4%
Petroleum	1.22	1.27	1.35	1.41	1.49	1.58	1.63	1.67	1.70	1.73	1.78	1.78	1.77	8.7%
Natural Gas	40.30	37.32	34.63	32.63	30.35	29.97	29.89	29.68	29.79	29.80	28.80	30.12	31.03	-2.4%
Nuclear	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	9.28	0.0%
Pumped Storage/Other 1/	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	--
Renewables 2/	10.74	11.31	11.34	11.34	11.29	11.28	11.24	11.25	11.25	11.26	11.23	11.20	10.80	2.2%
Total	212.69	215.11	218.24	220.58	222.62	227.02	231.22	235.25	239.05	241.82	244.83	246.16	247.69	0.6%
Western Electricity Coordinating Council/Northwest Pow														
Coal	80.68	80.75	80.22	81.38	87.69	93.83	99.65	103.51	108.32	113.84	119.49	124.97	130.26	2.3%
Petroleum	0.31	0.31	0.32	0.33	0.39	0.44	0.51	0.55	0.60	0.65	0.73	0.79	0.91	2.5%
Natural Gas	28.57	28.37	17.71	16.39	12.68	13.73	13.60	8.49	7.83	7.83	7.79	7.46	7.46	-4.8%
Nuclear	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	8.97	-0.2%
Pumped Storage/Other 1/	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	-5.8%
Renewables 2/	164.02	164.25	171.27	171.36	171.68	172.08	172.70	175.18	175.57	176.11	176.58	176.78	177.82	0.8%
Total	282.68	282.81	278.66	278.63	281.62	289.28	295.67	296.96	301.57	307.69	313.88	319.30	325.77	1.0%



Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Western Electricity Coordinating Council/Rocky Mountain and Arizona-New Mexico-Southern Nevada Power Area</b>														
Coal	153.85	163.25	172.30	182.41	190.13	198.81	208.21	217.87	227.07	236.09	244.12	251.05	258.09	3.3%
Petroleum	0.80	0.90	1.01	1.19	1.28	1.37	1.47	1.57	1.67	1.76	1.87	1.97	2.04	11.6%
Natural Gas	69.15	66.58	59.91	55.92	46.97	38.67	33.38	27.71	22.77	20.96	18.67	18.14	18.86	-5.0%
Nuclear	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	22.67	1.1%
Pumped Storage/Other 1/	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	--
Renewables 2/	24.32	24.88	27.38	27.55	28.64	29.30	29.99	30.43	30.68	30.94	31.21	31.45	31.72	2.8%
Total	270.66	278.14	283.14	289.62	289.58	290.71	295.62	300.17	304.81	312.39	318.58	325.40	333.60	1.8%
<b>Western Electricity Coordinating Council/California</b>														
Coal	32.32	32.35	32.37	32.37	32.37	32.37	32.35	32.35	32.35	32.35	32.35	32.35	32.35	1.1%
Petroleum	0.11	0.11	0.11	0.11	0.11	0.11	0.13	0.12	0.12	0.12	0.12	0.12	0.12	-10.9%
Natural Gas	94.50	94.11	100.83	105.72	110.63	109.92	107.41	108.89	109.92	107.34	101.73	98.62	95.68	0.3%
Nuclear	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	43.10	0.5%
Pumped Storage/Other 1/	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	-12.5%
Renewables 2/	71.37	72.10	72.50	73.14	73.75	74.69	75.64	76.24	76.95	77.42	82.50	83.24	83.74	0.8%
Total	241.89	242.27	249.40	254.94	260.46	260.69	259.13	261.21	262.94	260.83	260.31	257.94	255.49	0.6%

Table 76. Electricity Generation by Electricity Market Module Region and Source (billion Kilowatthours)

1/ Other includes methane, propane and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, spent sulfite liquor, and non-biogenic municipal waste.

2/ Renewables include conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

Sources: 2005 and 2006: Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>East Central Area Reliability Coordination Agreement</b>													
Coal	84.03	83.80	84.38	83.75	83.95	84.69	85.32	85.32	85.32	86.04	84.78	84.69	84.69
Oil and Natural Gas Steam 1/	3.51	3.51	3.46	3.46	3.46	3.46	3.42	1.23	1.20	1.20	1.20	1.20	1.20
Combined Cycle	11.45	11.45	11.45	12.13	12.13	12.13	12.13	12.67	12.67	12.67	12.67	12.67	12.67
Combustion Turbine/ Diesel	21.08	21.01	21.02	21.02	21.02	21.02	21.02	17.66	17.66	17.66	17.66	17.66	17.66
Nuclear Power	7.81	7.81	7.82	7.82	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89
Pumped Storage/Other 2/	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Fuel Cells	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
Renewable Sources 3/	1.54	1.54	1.71	2.12	2.14	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
Total	133.07	132.78	133.50	133.96	134.25	135.03	135.62	130.61	130.58	131.30	130.04	129.95	129.95
<b>Electric Reliability Council of Texas</b>													
Coal	15.27	15.27	15.27	15.27	15.27	16.02	16.91	18.37	18.37	18.37	18.37	18.37	18.70
Oil and Natural Gas Steam 1/	28.13	27.51	26.70	26.31	26.31	26.31	26.31	15.52	15.52	15.52	15.52	15.52	15.52
Combined Cycle	24.09	24.71	25.24	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65
Combustion Turbine/ Diesel	4.65	4.56	4.50	6.94	7.20	7.23	7.34	7.43	7.78	7.98	8.15	8.49	8.78
Nuclear Power	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.93	4.93	5.07	5.07	5.07	5.23
Pumped Storage/Other 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
Fuel Cells	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
Renewable Sources 3/	2.39	3.16	4.16	4.90	4.90	4.90	4.90	4.90	4.94	4.96	4.96	5.00	5.00
Total	79.39	80.06	80.72	83.92	84.27	85.11	86.16	77.02	77.44	77.85	78.07	78.50	79.31
<b>Mid-Atlantic Area Council</b>													
Coal	21.59	21.59	21.59	21.59	21.55	21.55	21.55	21.55	21.55	21.55	21.55	21.55	21.87
Oil and Natural Gas Steam 1/	7.63	7.63	7.63	7.63	7.63	7.63	7.63	6.75	6.75	6.75	6.75	6.75	6.75
Combined Cycle	12.08	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27
Combustion Turbine/ Diesel	10.58	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54
Nuclear Power	13.27	13.27	13.29	13.32	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48
Pumped Storage/Other 2/	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
Fuel Cells	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
Renewable Sources 3/	2.04	2.12	2.23	2.34	2.34	3.23	4.33	4.33	4.33	4.59	4.88	5.29	5.45
Total	68.67	69.89	70.02	70.16	70.27	71.16	72.26	71.38	71.38	71.66	71.98	72.43	72.95
<b>Mid-America Interconnected Network</b>													
Coal	28.73	28.73	28.73	29.19	29.81	30.35	31.10	31.85	31.84	31.80	31.80	31.79	31.77
Oil and Natural Gas Steam 1/	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.05	0.00	0.00	0.00	0.00	0.00
Combined Cycle	5.85	6.02	6.02	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Combustion Turbine/ Diesel	16.89	16.89	16.90	16.90	17.05	17.20	17.20	14.69	14.69	14.69	14.69	14.69	14.69
Nuclear Power	14.56	14.56	14.56	14.56	14.57	14.57	14.60	14.62	14.62	14.62	14.62	14.62	14.62
Pumped Storage/Other 2/	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Fuel Cells	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
Renewable Sources 3/	1.02	1.13	1.86	2.59	2.59	3.98	4.71	5.23	5.73	6.24	6.84	7.21	7.75
Total	68.30	68.59	69.32	71.08	71.87	73.95	75.46	73.47	73.91	74.38	74.98	75.34	75.87

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Mid-Continent Area Power Pool</b>													
Coal	18.62	18.61	19.11	19.11	18.87	18.87	19.05	19.06	19.24	19.46	19.74	19.98	20.21
Oil and Natural Gas Steam 1/	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.47	0.47	0.47	0.47	0.47	0.47
Combined Cycle	1.66	2.16	2.29	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
Combustion Turbine/ Diesel	7.72	7.82	8.02	8.12	8.33	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
Nuclear Power	3.08	3.08	3.08	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
Pumped Storage/Other 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
Fuel Cells	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
Renewable Sources 3/	5.07	5.28	6.02	6.27	6.38	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
Total	36.64	37.44	39.01	39.92	40.03	40.45	40.63	40.62	40.80	41.03	41.32	41.57	41.81
<b>Northeast Power Coordinating Council/ New York</b>													
Coal	3.19	3.19	3.00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83
Oil and Natural Gas Steam 1/	11.63	11.27	11.20	11.20	11.20	11.20	11.20	11.07	11.07	11.07	11.07	11.07	11.07
Combined Cycle	7.37	7.74	7.74	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28
Combustion Turbine/ Diesel	5.11	5.09	5.26	5.26	5.26	5.26	5.26	4.77	4.77	4.77	4.77	4.77	4.77
Nuclear Power	5.84	5.84	5.84	5.84	5.84	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92
Pumped Storage/Other 2/	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Fuel Cells	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
Renewable Sources 3/	4.81	5.02	5.03	5.31	5.31	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Total	39.26	39.44	39.36	40.01	40.01	40.14	40.14	39.53	39.53	39.53	39.53	39.53	39.53
<b>Northeast Power Coordinating Council/New England</b>													
Coal	3.71	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53
Oil and Natural Gas Steam 1/	7.17	7.17	7.17	7.17	7.17	7.17	7.17	5.73	5.73	5.73	5.73	5.73	5.73
Combined Cycle	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64
Combustion Turbine/ Diesel	1.81	1.81	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Nuclear Power	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90
Pumped Storage/Other 2/	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
Fuel Cells	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
Renewable Sources 3/	2.92	2.98	3.05	3.16	3.16	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51
Total	31.80	31.68	31.80	31.92	31.92	34.27	34.27	32.83	32.84	32.85	32.87	32.89	32.90
<b>Southeastern Electric Reliability Council/Florida</b>													
Coal	10.30	10.30	10.30	10.30	10.30	10.30	10.30	10.30	10.52	11.74	12.85	13.92	15.04
Oil and Natural Gas Steam 1/	10.49	10.49	10.49	10.49	10.49	10.49	10.44	10.44	10.44	10.44	10.44	10.44	10.44
Combined Cycle	16.12	16.12	17.26	17.42	18.58	18.58	18.58	18.58	18.58	18.58	18.76	18.97	19.14
Combustion Turbine/ Diesel	9.69	10.00	10.48	10.46	10.46	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44
Nuclear Power	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
Pumped Storage/Other 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
Fuel Cells	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
Renewable Sources 3/	0.64	0.64	0.70	0.70	0.70	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Total	51.03	51.33	53.01	53.15	54.31	54.64	54.57	54.57	54.78	56.01	57.30	58.58	59.87
<b>Southeastern Electric Reliability Council/excluding Florida</b>													
Coal	70.76	70.76	71.38	71.38	72.03	71.82	71.56	71.36	71.36	71.66	71.96	72.26	72.56
Oil and Natural Gas Steam 1/	18.45	18.39	18.39	18.39	18.39	18.39	18.39	13.12	13.12	13.12	13.12	13.12	13.12
Combined Cycle	37.01	37.95	38.63	39.85	40.42	40.98	40.98	40.98	40.98	40.98	40.98	40.98	40.98
Combustion Turbine/ Diesel	32.13	32.21	32.95	32.86	32.86	32.66	32.36	32.35	32.19	32.19	32.19	32.19	32.19
Nuclear Power	32.55	32.55	32.74	32.74	32.77	32.77	32.99	33.16	33.39	33.56	33.68	33.96	35.03
Pumped Storage/Other 2/	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67
Fuel Cells	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
Renewable Sources 3/	12.57	12.60	12.67	12.71	12.71	12.73	12.73	12.73	12.92	12.92	12.92	12.92	12.92
Total	211.14	212.14	214.43	215.61	216.85	217.02	216.69	211.37	211.62	212.09	212.51	213.10	214.46

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Southwest Power Pool</b>													
Coal	21.47	21.47	21.47	21.47	21.47	22.09	22.09	22.09	22.09	22.09	22.09	22.09	22.09
Oil and Natural Gas Steam 1/	12.99	12.99	12.96	12.96	12.96	12.94	12.94	9.90	9.90	9.90	9.90	9.90	9.90
Combined Cycle	9.93	9.93	9.93	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46
Combustion Turbine/ Diesel	7.43	7.43	7.51	7.51	7.51	7.51	7.51	6.03	6.03	6.03	6.03	6.03	6.03
Nuclear Power	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Pumped Storage/Other 2/	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Fuel Cells	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
Renewable Sources 3/	3.51	3.85	4.12	4.27	4.27	4.27	4.28	4.28	4.28	4.28	4.28	4.28	4.29
Total	57.01	57.35	57.66	58.34	58.34	58.95	58.95	54.43	54.43	54.44	54.44	54.44	54.44
<b>Western Electricity Coordinating Council/Northwest Power Pool Area</b>													
Coal	11.28	11.39	11.39	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59	11.59
Oil and Natural Gas Steam 1/	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.76	0.76	0.76	0.76	0.76	0.76
Combined Cycle	5.22	5.47	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13
Combustion Turbine/ Diesel	2.08	2.14	2.13	2.13	2.13	2.13	2.13	1.76	1.76	1.76	1.76	1.76	1.76
Nuclear Power	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Pumped Storage/Other 2/	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Fuel Cells	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
Renewable Sources 3/	35.73	36.42	37.02	38.31	38.31	38.32	38.32	38.33	38.46	38.47	38.47	38.48	38.52
Total	56.53	57.63	58.88	60.38	60.38	60.38	60.39	60.01	60.14	60.15	60.16	60.16	60.20
<b>Western Electricity Coordinating Council/Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area</b>													
Coal	16.43	16.83	16.90	16.90	18.05	18.05	18.49	18.49	18.49	18.49	18.49	18.78	19.91
Oil and Natural Gas Steam 1/	3.11	3.11	3.11	3.11	3.11	3.11	3.11	3.09	3.09	3.09	3.09	3.09	3.09
Combined Cycle	14.98	17.02	17.65	17.82	18.32	18.59	19.24	20.10	20.10	20.10	20.10	20.10	20.10
Combustion Turbine/ Diesel	5.06	5.28	5.55	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
Nuclear Power	2.81	2.81	2.84	2.84	2.84	2.84	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Pumped Storage/Other 2/	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Fuel Cells	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
Renewable Sources 3/	6.12	6.29	7.24	7.30	7.30	7.31	7.36	7.37	7.37	7.37	7.38	7.38	7.47
Total	49.30	52.12	54.07	55.00	56.65	56.92	58.12	58.95	58.96	58.96	58.97	59.25	60.48
<b>Western Electricity Coordinating Council/California</b>													
Coal	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
Oil and Natural Gas Steam 1/	15.96	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58
Combined Cycle	12.88	14.05	14.80	14.80	15.87	15.87	15.87	15.87	15.87	15.87	16.00	16.60	17.21
Combustion Turbine/ Diesel	6.09	6.14	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.89	6.99	7.08
Nuclear Power	5.45	5.45	5.46	5.46	5.46	5.46	5.48	5.48	5.48	5.48	5.48	5.48	5.48
Pumped Storage/Other 2/	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69
Fuel Cells	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
Renewable Sources 3/	15.08	15.32	15.36	15.59	15.89	16.40	16.60	16.78	16.91	17.05	17.10	17.16	17.26
Total	63.46	64.53	65.76	66.00	67.43	67.98	68.25	68.48	68.65	68.83	69.48	70.39	71.33

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>East Central Area Reliability Coordination Agreement</b>														
Coal	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	84.69	0.0%
Oil and Natural Gas Steam 1/	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	-4.4%
Combined Cycle	12.67	12.67	12.67	12.67	12.89	14.12	15.48	16.02	16.09	16.29	16.43	16.61	17.66	1.8%
Combustion Turbine/ Diesel	17.66	17.66	17.66	17.66	17.66	17.66	17.66	18.30	19.58	20.72	21.89	22.96	23.13	0.4%
Nuclear Power	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	0.0%
Pumped Storage/Other 2/	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	0.0%
Fuel Cells	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	--
Renewable Sources 3/	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.5%
Total	129.95	129.95	129.95	129.95	130.16	131.39	132.75	133.94	135.29	136.65	137.99	139.26	140.50	0.2%
<b>Electric Reliability Council of Texas</b>														
Coal	20.94	20.97	21.98	21.98	22.21	23.17	24.40	25.22	26.11	26.92	27.66	29.01	30.94	3.0%
Oil and Natural Gas Steam 1/	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	15.52	-2.4%
Combined Cycle	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	25.65	0.2%
Combustion Turbine/ Diesel	8.78	8.78	8.95	9.23	9.74	9.88	10.02	10.09	10.17	10.46	10.65	11.07	11.07	3.8%
Nuclear Power	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	0.3%
Pumped Storage/Other 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	--
Fuel Cells	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	--
Renewable Sources 3/	5.01	5.01	5.08	5.08	5.08	5.25	5.43	5.51	5.64	5.70	5.76	5.98	5.98	2.7%
Total	81.61	81.69	82.98	83.33	84.20	85.65	87.30	88.41	89.56	90.78	91.83	93.85	95.84	0.8%
<b>Mid-Atlantic Area Council</b>														
Coal	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.95	23.58	24.25	25.60	25.99	0.8%
Oil and Natural Gas Steam 1/	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	-0.5%
Combined Cycle	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	0.0%
Combustion Turbine/ Diesel	10.54	10.68	11.18	11.85	12.51	13.25	13.97	14.62	14.62	14.62	14.62	14.62	14.62	1.4%
Nuclear Power	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	13.48	12.86	12.86	-0.1%
Pumped Storage/Other 2/	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	0.0%
Fuel Cells	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	--
Renewable Sources 3/	5.74	6.31	6.52	6.59	6.67	6.68	6.69	6.74	6.85	6.94	6.98	6.98	7.25	5.3%
Total	73.80	74.64	75.48	76.35	77.21	78.08	78.94	79.77	80.65	81.49	82.32	83.17	83.94	0.8%
<b>Mid-America Interconnected Network</b>														
Coal	31.72	31.72	31.60	31.60	31.60	31.46	31.46	31.46	31.46	31.46	31.46	31.46	31.46	0.4%
Oil and Natural Gas Steam 1/	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	-20.2%
Combined Cycle	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.75	0.5%
Combustion Turbine/ Diesel	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	15.06	-0.5%
Nuclear Power	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	14.62	13.24	-0.4%
Pumped Storage/Other 2/	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.0%
Fuel Cells	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	--
Renewable Sources 3/	8.08	8.53	8.94	9.27	9.35	9.97	10.55	11.13	11.20	11.27	11.35	11.42	11.71	10.2%
Total	76.15	76.59	76.89	77.21	77.29	77.77	78.35	78.94	79.10	79.27	79.43	79.57	79.09	0.6%

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Mid-Continent Area Power Pool</b>														
Coal	20.43	20.48	20.56	20.56	20.56	20.56	20.56	20.56	20.56	20.53	20.53	20.53	20.53	0.4%
Oil and Natural Gas Steam 1/	0.47	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.44	0.44	0.44	0.44	-0.4%
Combined Cycle	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	1.1%
Combustion Turbine/ Diesel	8.72	8.83	9.04	9.32	9.47	9.78	10.09	10.35	10.63	10.96	11.24	11.48	11.71	1.7%
Nuclear Power	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	2.53	-0.8%
Pumped Storage/Other 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	--
Fuel Cells	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	--
Renewable Sources 3/	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	0.8%
Total	42.04	42.21	42.51	42.81	42.97	43.29	43.62	43.89	44.18	44.49	44.81	45.10	44.79	0.7%
<b>Northeast Power Coordinating Council/ New York</b>														
Coal	3.03	3.03	3.12	3.34	3.56	3.85	4.10	4.33	4.59	5.00	5.36	5.66	7.14	3.4%
Oil and Natural Gas Steam 1/	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	11.07	-0.1%
Combined Cycle	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	0.3%
Combustion Turbine/ Diesel	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.63	4.59	4.53	-0.5%
Nuclear Power	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	4.72	4.72	-0.9%
Pumped Storage/Other 2/	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	0.0%
Fuel Cells	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	--
Renewable Sources 3/	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	0.3%
Total	39.73	39.73	39.82	40.04	40.26	40.55	40.80	41.03	41.29	41.70	41.92	40.97	42.40	0.3%
<b>Northeast Power Coordinating Council/New England</b>														
Coal	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	0.0%
Oil and Natural Gas Steam 1/	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	-0.9%
Combined Cycle	10.64	10.85	11.16	11.50	11.85	12.10	12.10	12.10	12.10	12.10	12.10	12.10	12.10	0.5%
Combustion Turbine/ Diesel	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	0.1%
Nuclear Power	3.90	3.90	3.90	3.90	3.90	3.90	3.90	4.42	4.42	4.95	4.95	4.95	5.61	1.5%
Pumped Storage/Other 2/	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	0.0%
Fuel Cells	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	--
Renewable Sources 3/	5.51	5.51	5.51	5.53	5.53	5.53	5.53	5.56	5.56	5.58	5.58	5.58	5.64	2.7%
Total	32.91	33.16	33.52	33.93	34.29	34.55	34.57	35.12	35.13	35.70	35.70	35.70	36.42	0.6%
<b>Southeastern Electric Reliability Council/Florida</b>														
Coal	16.31	17.44	18.59	19.79	19.79	19.79	19.79	19.79	19.79	20.12	21.01	22.10	22.32	3.3%
Oil and Natural Gas Steam 1/	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44	0.0%
Combined Cycle	19.14	19.31	19.31	19.31	19.31	19.48	19.59	20.00	20.21	20.99	20.99	20.99	20.99	1.1%
Combustion Turbine/ Diesel	10.44	10.44	10.53	10.61	10.66	10.66	10.66	10.66	10.66	10.77	10.77	10.77	10.90	0.4%
Nuclear Power	3.78	3.78	3.78	3.78	5.04	6.15	7.23	8.07	9.19	9.19	9.19	9.70	10.63	4.4%
Pumped Storage/Other 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	--
Fuel Cells	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	--
Renewable Sources 3/	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	2.0%
Total	61.14	62.46	63.76	65.09	66.47	67.81	69.07	70.38	71.78	73.06	74.02	75.68	77.00	1.7%
<b>Southeastern Electric Reliability Council/excluding Florid</b>														
Coal	72.56	72.95	72.95	75.59	77.78	80.16	82.13	84.05	85.75	87.82	89.63	91.38	92.65	1.1%
Oil and Natural Gas Steam 1/	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.04	-1.4%
Combined Cycle	40.98	40.98	40.98	40.98	41.13	41.13	41.13	41.13	41.13	41.13	41.30	41.50	41.71	0.4%
Combustion Turbine/ Diesel	32.19	32.19	32.19	32.38	32.91	34.00	35.46	36.92	38.71	40.08	41.51	42.90	44.85	1.4%
Nuclear Power	37.03	39.43	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	42.31	41.60	1.0%
Pumped Storage/Other 2/	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	0.0%
Fuel Cells	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	--
Renewable Sources 3/	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.95	0.1%
Total	216.46	219.25	222.13	225.01	227.96	231.48	234.97	238.42	241.98	245.48	248.95	252.35	255.08	0.8%

Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Southwest Power Pool</b>														
Coal	22.55	23.22	23.93	24.51	25.09	25.73	26.31	26.87	27.37	27.74	28.28	28.28	28.36	1.2%
Oil and Natural Gas Steam 1/	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	-1.1%
Combined Cycle	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	10.46	0.2%
Combustion Turbine/ Diesel	6.03	6.03	6.03	6.03	6.07	6.17	6.27	6.35	6.53	6.86	7.01	7.66	8.27	0.4%
Nuclear Power	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	0.0%
Pumped Storage/Other 2/	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.0%
Fuel Cells	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	--
Renewable Sources 3/	4.29	4.29	4.29	4.30	4.30	4.30	4.30	4.31	4.31	4.31	4.31	4.32	4.32	0.5%
Total	54.91	55.57	56.29	56.87	57.51	58.26	58.95	59.62	60.31	61.02	61.72	62.38	63.09	0.4%
<b>Western Electricity Coordinating Council/Northwest Pow</b>														
Coal	11.59	11.59	11.59	11.77	12.52	13.29	14.07	14.70	15.29	16.01	16.78	17.52	18.22	2.0%
Oil and Natural Gas Steam 1/	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	-0.1%
Combined Cycle	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	0.5%
Combustion Turbine/ Diesel	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	-0.8%
Nuclear Power	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	0.0%
Pumped Storage/Other 2/	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.0%
Fuel Cells	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	--
Renewable Sources 3/	38.64	38.64	40.12	40.12	40.32	40.48	40.62	40.94	41.12	41.26	41.36	41.42	41.65	0.6%
Total	60.36	60.40	61.92	62.14	63.13	64.11	65.07	66.05	66.86	67.77	68.68	69.52	70.49	0.8%
<b>Western Electricity Coordinating Council/Rocky Mounta and Arizona-New Mexico-Southern Nevada Power Area</b>														
Coal	21.20	22.42	23.91	25.32	26.50	27.76	29.06	30.38	31.67	32.92	34.05	35.03	35.97	3.2%
Oil and Natural Gas Steam 1/	3.09	2.93	2.81	2.70	2.69	2.69	2.61	2.50	2.50	2.50	2.50	2.50	2.50	-0.9%
Combined Cycle	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	20.10	0.7%
Combustion Turbine/ Diesel	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.41	6.59	6.80	1.1%
Nuclear Power	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	0.1%
Pumped Storage/Other 2/	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.0%
Fuel Cells	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	--
Renewable Sources 3/	7.48	7.62	7.66	7.66	7.70	7.73	7.82	7.90	7.90	7.90	7.91	7.91	7.97	1.0%
Total	61.78	62.97	64.39	65.71	66.94	68.26	69.60	70.90	72.25	73.58	75.03	76.38	77.81	1.7%
<b>Western Electricity Coordinating Council/California</b>														
Coal	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	0.0%
Oil and Natural Gas Steam 1/	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	15.58	0.0%
Combined Cycle	17.87	18.54	19.24	19.98	20.76	21.57	22.37	23.15	23.79	23.79	24.03	24.03	24.03	2.3%
Combustion Turbine/ Diesel	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.36	8.28	8.50	9.32	10.11	2.1%
Nuclear Power	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	0.0%
Pumped Storage/Other 2/	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	0.0%
Fuel Cells	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	--
Renewable Sources 3/	17.37	17.50	17.60	17.71	17.82	17.98	18.14	18.29	18.44	18.50	19.94	20.05	20.11	1.1%
Total	72.31	73.25	74.19	75.18	76.23	77.34	78.47	79.53	80.68	81.81	83.87	84.94	85.94	1.2%



Table 77. Electricity Generation Capacity by Electricity Market Module Region and Source (gigawatts)

1/ Includes oil-, gas-, and dual-fired capacity.

2/ Other includes methane, propane, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

3/ Renewable sources include conventional hydroelectric, geothermal, wood, wood waste, all municipal waste, other biomass, solar thermal, photovoltaics, and wind power.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators. Values represent net summer capacity, which is the steady hourly output that generating equipment is expected to supply to system load as demonstrated by tests during summer peak load.

Sources: 2005 and 2006: Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report," (preliminary). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 78. Renewable Energy Generation by Fuel  
 East Central Area Reliability Coordination Agreement - 01

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
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
Municipal Waste 3/	0.17	0.17	0.18	0.18	0.18	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Wood and Other Biomass 4/	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
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
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
Wind	0.09	0.09	0.26	0.67	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Offshore Wind	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
Total	1.54	1.54	1.71	2.12	2.14	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	4.20	4.08	2.80	2.62	2.48	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26
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
Biogenic Municipal Waste 6/	0.55	0.62	0.83	0.83	0.83	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Wood and Other Biomass 4/	1.11	1.14	1.73	1.72	1.72	1.70	1.62	1.72	1.72	1.68	1.69	1.74	1.65
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
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
Wind	0.31	0.36	0.40	1.31	2.17	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
Offshore Wind	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
Total	6.17	6.20	5.76	6.48	7.20	7.36	7.28	7.38	7.38	7.34	7.35	7.39	7.31
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
Biogenic Municipal Waste 6/	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
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
Wind	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Offshore Wind	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
Total	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.09	0.08

Table 78. Renewable Energy Generation by Fuel  
 East Central Area Reliability Coordination Agreement - 01

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
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
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
Wood and Other Biomass 4/	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.40	0.48	0.50	0.57	0.43
Solar Photovoltaic 5/	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wind	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
Total	0.30	0.30	0.31	0.31	0.31	0.32	0.33	0.33	0.57	0.65	0.67	0.74	0.60
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	0.62	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
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
Municipal Waste	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
Wood and Other Biomass 4/	0.97	0.95	0.95	0.95	0.95	1.00	1.02	1.04	2.82	3.43	3.57	4.07	3.03
Solar Photovoltaic 5/	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Total	1.80	1.70	1.70	1.71	1.72	1.76	1.78	1.80	3.59	4.20	4.34	4.84	3.81
Energy Consumption (quadrillion Btu)													
Conventional Hydropower 9/	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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.06	0.06	0.08	0.06
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
Wind	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
Total	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.06	0.07	0.07	0.09	0.07

Table 78. Renewable Energy Generation by Fuel  
 East Central Area Reliability Coordination Agreement - 01

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	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	--
Municipal Waste 3/	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	1.1%
Wood and Other Biomass 4/	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.0%
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	--
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	--
Wind	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	8.6%
Offshore Wind	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	--
<b>Total</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>2.19</b>	<b>1.5%</b>
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	-2.4%
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	--
Biogenic Municipal Waste 6/	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	2.8%
Wood and Other Biomass 4/	1.77	1.60	1.39	1.60	1.69	1.58	1.58	1.68	1.69	1.59	1.55	1.55	1.38	0.8%
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	--
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	--
Wind	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	7.8%
Offshore Wind	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	--
<b>Total</b>	<b>7.43</b>	<b>7.26</b>	<b>7.05</b>	<b>7.26</b>	<b>7.34</b>	<b>7.24</b>	<b>7.24</b>	<b>7.33</b>	<b>7.34</b>	<b>7.25</b>	<b>7.21</b>	<b>7.21</b>	<b>7.03</b>	<b>0.5%</b>
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-2.4%
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	--
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.8%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.5%
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	--
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	--
Wind	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	7.8%
Offshore Wind	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	--
<b>Total</b>	<b>0.09</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>0.08</b>	<b>1.0%</b>

Table 78. Renewable Energy Generation by Fuel  
 East Central Area Reliability Coordination Agreement - 01

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	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	--
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	0.0%
Wood and Other Biomass 4/	0.59	1.00	1.38	1.80	2.28	2.64	3.11	3.62	3.93	3.93	3.93	3.94	3.94	14.7%
Solar Photovoltaic 5/	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.08	0.09	0.10	0.12	0.14	12.8%
Wind	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	14.4%
<b>Total</b>	<b>0.77</b>	<b>1.19</b>	<b>1.57</b>	<b>2.00</b>	<b>2.49</b>	<b>2.86</b>	<b>3.33</b>	<b>3.86</b>	<b>4.18</b>	<b>4.20</b>	<b>4.22</b>	<b>4.24</b>	<b>4.26</b>	<b>11.6%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	4.20	7.31	10.11	13.31	17.11	19.78	23.21	27.06	29.33	29.35	29.36	29.37	29.38	15.4%
Solar Photovoltaic 5/	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.15	0.18	0.21	13.4%
Wind	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.05	0.05	14.9%
<b>Total</b>	<b>4.99</b>	<b>8.11</b>	<b>10.92</b>	<b>14.13</b>	<b>17.93</b>	<b>20.62</b>	<b>24.06</b>	<b>27.93</b>	<b>30.22</b>	<b>30.26</b>	<b>30.30</b>	<b>30.34</b>	<b>30.38</b>	<b>12.8%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
Conventional Hydropower 9/	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	0.0%
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.08	0.12	0.15	0.23	0.27	0.30	0.32	0.39	0.44	0.44	0.44	0.44	0.44	15.8%
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	13.4%
Wind	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	14.9%
<b>Total</b>	<b>0.09</b>	<b>0.13</b>	<b>0.16</b>	<b>0.24</b>	<b>0.29</b>	<b>0.31</b>	<b>0.34</b>	<b>0.40</b>	<b>0.45</b>	<b>0.45</b>	<b>0.45</b>	<b>0.45</b>	<b>0.45</b>	<b>13.2%</b>

Table 78. Renewable Energy Generation by Fuel  
East Central Area Reliability Coordination Agreement - 01

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 79. Renewable Energy Generation by Fuel  
Electric Reliability Council of Texas - 02

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
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
Municipal Waste 3/	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Wood and Other Biomass 4/	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 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
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Wind	1.77	2.53	3.54	4.28	4.28	4.28	4.28	4.28	4.31	4.33	4.33	4.37	4.37
Offshore Wind	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
Total	2.39	3.16	4.16	4.90	4.90	4.90	4.90	4.90	4.94	4.96	4.96	5.00	5.00
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	1.00	0.74	0.68	0.71	0.74	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
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
Biogenic Municipal Waste 6/	0.10	0.12	0.43	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Wood and Other Biomass 4/	0.00	0.00	0.11	0.11	0.11	0.11	0.11	0.11	1.00	1.64	2.85	2.71	2.77
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
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Wind	3.97	5.55	9.52	11.46	12.14	12.14	12.13	12.14	12.22	12.28	12.28	12.39	12.40
Offshore Wind	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
Total	5.07	6.42	10.75	12.74	13.46	13.48	13.48	13.48	14.46	15.17	16.38	16.35	16.42
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	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
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
Biogenic Municipal Waste 6/	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
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03	0.03
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
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
Wind	0.04	0.06	0.10	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Offshore Wind	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
Total	0.05	0.06	0.11	0.13	0.14	0.14	0.14	0.14	0.15	0.16	0.17	0.17	0.17

Table 79. Renewable Energy Generation by Fuel  
 Electric Reliability Council of Texas - 02

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.66	0.74	0.71	0.88
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
Wind	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
Total	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.33	0.67	0.74	0.72	0.89
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
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
Municipal Waste	0.10	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.41	4.93	5.48	5.30	6.53
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	0.01
Wind	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
Total	0.10	0.12	0.12	0.12	0.12	0.12	0.12	0.12	2.53	5.06	5.60	5.42	6.66
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.10	0.11	0.14
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
Wind	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
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.10	0.11	0.14



Table 79. Renewable Energy Generation by Fuel  
Electric Reliability Council of Texas - 02

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	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	--
Municipal Waste 3/	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.3%
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.14	0.14	0.14	0.22	0.22	--
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	--
Solar Photovoltaic 5/	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	23.4%
Wind	4.37	4.37	4.44	4.44	4.44	4.56	4.68	4.76	4.86	4.91	4.97	5.11	5.11	3.0%
Offshore Wind	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	--
Total	5.01	5.01	5.08	5.08	5.08	5.25	5.43	5.51	5.64	5.70	5.76	5.98	5.98	2.7%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.1%
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	--
Biogenic Municipal Waste 6/	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	5.7%
Wood and Other Biomass 4/	3.45	3.81	4.00	4.15	4.33	4.19	4.05	4.03	3.98	4.05	4.08	3.89	4.12	--
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	--
Solar Photovoltaic 5/	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.08	0.09	--
Wind	12.39	12.39	12.58	12.58	12.58	12.91	13.26	13.48	13.75	13.90	14.08	14.46	14.45	4.1%
Offshore Wind	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	--
Total	17.10	17.45	17.85	18.00	18.18	18.38	18.60	18.80	19.02	19.25	19.46	19.66	19.88	4.8%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	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	0.1%
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	--
Biogenic Municipal Waste 6/	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	5.7%
Wood and Other Biomass 4/	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	--
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	--
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	--
Wind	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	4.1%
Offshore Wind	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	--
Total	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	4.8%

Table 79. Renewable Energy Generation by Fuel  
Electric Reliability Council of Texas - 02

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.93	0.98	1.03	0.00	0.00	0.53	1.03	1.03	0.70	0.72	0.77	0.80	0.70	--
Solar Photovoltaic 5/	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	18.5%
Wind	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	0.1%
<b>Total</b>	<b>0.94</b>	<b>0.99</b>	<b>1.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.54</b>	<b>1.05</b>	<b>1.05</b>	<b>0.73</b>	<b>0.75</b>	<b>0.81</b>	<b>0.84</b>	<b>0.76</b>	<b>22.4%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
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	--
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	--
Municipal Waste	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.0%
Wood and Other Biomass 4/	6.94	7.32	7.65	0.00	0.00	3.91	7.65	7.65	5.23	5.37	5.75	5.94	5.25	--
Solar Photovoltaic 5/	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	19.1%
Wind	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	0.1%
<b>Total</b>	<b>7.07</b>	<b>7.45</b>	<b>7.78</b>	<b>0.13</b>	<b>0.13</b>	<b>4.05</b>	<b>7.80</b>	<b>7.81</b>	<b>5.39</b>	<b>5.54</b>	<b>5.93</b>	<b>6.13</b>	<b>5.45</b>	<b>17.3%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.14	0.12	0.12	0.05	0.05	0.09	0.13	0.14	0.12	0.12	0.12	0.12	0.12	--
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	19.1%
Wind	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	0.1%
<b>Total</b>	<b>0.14</b>	<b>0.12</b>	<b>0.12</b>	<b>0.05</b>	<b>0.05</b>	<b>0.09</b>	<b>0.14</b>	<b>0.14</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.13</b>	<b>0.12</b>	<b>19.5%</b>

Table 79. Renewable Energy Generation by Fuel  
Electric Reliability Council of Texas - 02

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 80. Renewable Energy Generation by Fuel  
Mid-Atlantic Area Council - 03

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste 3/	0.67	0.72	0.74	0.74	0.74	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.29	0.57	0.98	1.15
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
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
Wind	0.13	0.16	0.25	0.36	0.36	1.12	2.23	2.23	2.23	2.23	2.23	2.23	2.23
Offshore Wind	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
Total	2.04	2.12	2.23	2.34	2.34	3.23	4.33	4.33	4.33	4.59	4.88	5.29	5.45
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	3.58	4.38	4.50	4.51	4.60	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56
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
Biogenic Municipal Waste 6/	2.51	2.69	3.10	3.10	3.10	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11
Wood and Other Biomass 4/	0.20	0.19	0.32	0.32	0.31	10.09	8.53	12.52	14.29	17.47	18.06	21.87	24.23
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
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
Wind	0.14	0.15	0.59	0.70	0.88	2.91	5.85	5.85	5.85	5.85	5.85	5.85	5.85
Offshore Wind	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
Total	6.43	7.42	8.51	8.63	8.89	21.66	23.05	27.04	28.81	31.99	32.58	36.39	38.75
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	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
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
Biogenic Municipal Waste 6/	0.03	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.10	0.09	0.13	0.14	0.17	0.18	0.21	0.23
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
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
Wind	0.00	0.00	0.01	0.01	0.01	0.03	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Offshore Wind	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
Total	0.07	0.08	0.10	0.10	0.10	0.23	0.25	0.29	0.31	0.33	0.34	0.37	0.39

Table 80. Renewable Energy Generation by Fuel  
Mid-Atlantic Area Council - 03

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
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
Wood and Other Biomass 4/	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Solar Photovoltaic 5/	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Total	0.13	0.14	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.18	0.19	0.20
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
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
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
Wood and Other Biomass 4/	0.71	0.72	0.72	0.72	0.72	0.75	0.77	0.77	0.78	0.78	0.78	0.79	0.80
Solar Photovoltaic 5/	0.01	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.07
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Total	0.97	0.99	1.00	1.01	1.02	1.06	1.07	1.08	1.08	1.09	1.10	1.11	1.13
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
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
Municipal Waste	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
Wood and Other Biomass 4/	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
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
Wind	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
Total	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

Table 80. Renewable Energy Generation by Fuel  
Mid-Atlantic Area Council - 03

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (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	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	--
Municipal Waste 3/	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.8%
Wood and Other Biomass 4/	1.43	2.00	2.22	2.29	2.36	2.37	2.38	2.44	2.54	2.64	2.67	2.67	2.94	21.4%
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	--
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	--
Wind	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	11.6%
Offshore Wind	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	--
<b>Total</b>	<b>5.74</b>	<b>6.31</b>	<b>6.52</b>	<b>6.59</b>	<b>6.67</b>	<b>6.68</b>	<b>6.69</b>	<b>6.74</b>	<b>6.85</b>	<b>6.94</b>	<b>6.98</b>	<b>6.98</b>	<b>7.25</b>	<b>5.3%</b>
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	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	0.2%
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	--
Biogenic Municipal Waste 6/	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	4.11	1.8%
Wood and Other Biomass 4/	27.64	29.92	32.10	32.34	33.17	33.65	33.97	34.41	34.70	34.88	35.24	35.58	36.17	24.4%
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	--
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	--
Wind	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85	16.4%
Offshore Wind	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	--
<b>Total</b>	<b>42.16</b>	<b>44.44</b>	<b>46.62</b>	<b>46.86</b>	<b>47.69</b>	<b>48.17</b>	<b>48.49</b>	<b>48.93</b>	<b>49.22</b>	<b>49.40</b>	<b>49.76</b>	<b>50.10</b>	<b>50.69</b>	<b>8.3%</b>
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	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	0.2%
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	--
Biogenic Municipal Waste 6/	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	1.8%
Wood and Other Biomass 4/	0.26	0.28	0.30	0.30	0.30	0.31	0.31	0.32	0.32	0.32	0.32	0.32	0.33	--
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	--
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	--
Wind	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	16.4%
Offshore Wind	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	--
<b>Total</b>	<b>0.42</b>	<b>0.44</b>	<b>0.46</b>	<b>0.46</b>	<b>0.47</b>	<b>0.47</b>	<b>0.47</b>	<b>0.48</b>	<b>0.48</b>	<b>0.48</b>	<b>0.48</b>	<b>0.48</b>	<b>0.49</b>	<b>7.7%</b>

Table 80. Renewable Energy Generation by Fuel  
Mid-Atlantic Area Council - 03

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	0.0%
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	--
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	0.0%
Wood and Other Biomass 4/	0.10	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.3%
Solar Photovoltaic 5/	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.15	0.18	0.21	0.24	0.28	0.32	13.2%
Wind	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	17.7%
<b>Total</b>	<b>0.21</b>	<b>0.23</b>	<b>0.25</b>	<b>0.27</b>	<b>0.29</b>	<b>0.31</b>	<b>0.33</b>	<b>0.36</b>	<b>0.39</b>	<b>0.43</b>	<b>0.47</b>	<b>0.52</b>	<b>0.57</b>	<b>5.9%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
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	0.0%
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	--
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	0.0%
Wood and Other Biomass 4/	0.80	0.83	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.93	1.1%
Solar Photovoltaic 5/	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.22	0.26	0.31	0.37	0.42	0.48	13.8%
Wind	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	17.8%
<b>Total</b>	<b>1.15</b>	<b>1.20</b>	<b>1.27</b>	<b>1.31</b>	<b>1.35</b>	<b>1.38</b>	<b>1.42</b>	<b>1.46</b>	<b>1.52</b>	<b>1.58</b>	<b>1.65</b>	<b>1.71</b>	<b>1.79</b>	<b>2.5%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	0.0%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	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	0.9%
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	13.8%
Wind	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	17.8%
<b>Total</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>1.0%</b>

Table 80. Renewable Energy Generation by Fuel  
Mid-Atlantic Area Council - 03

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.



Table 81. Renewable Energy Generation by Fuel  
Mid-America Interconnected Network - 04

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	0.65	0.65	0.65	0.65	0.65	0.65	0.83	0.83	0.83	0.83	0.83	0.83	0.83
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
Municipal Waste 3/	0.23	0.25	0.25	0.25	0.25	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
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
Wind	0.12	0.22	0.95	1.67	1.67	2.99	3.54	4.06	4.56	5.08	5.68	6.04	6.58
Offshore Wind	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
Total	1.02	1.13	1.86	2.59	2.59	3.98	4.71	5.23	5.73	6.24	6.84	7.21	7.75
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	3.09	2.30	2.94	2.97	3.06	3.06	3.94	3.94	3.94	3.94	3.94	3.94	3.94
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
Biogenic Municipal Waste 6/	0.63	0.68	1.21	1.21	1.21	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Wood and Other Biomass 4/	0.01	0.01	0.18	0.18	0.18	0.12	0.19	0.24	1.06	1.32	1.54	3.56	4.15
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
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
Wind	0.15	0.26	1.69	3.15	4.16	8.40	10.15	11.86	13.51	15.22	17.21	18.43	20.22
Offshore Wind	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
Total	3.89	3.24	6.01	7.50	8.60	13.38	16.08	17.84	20.31	22.27	24.49	27.72	30.11
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.03	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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
Biogenic Municipal Waste 6/	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.04	0.05
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
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
Wind	0.00	0.00	0.02	0.03	0.04	0.08	0.10	0.12	0.14	0.15	0.17	0.18	0.20
Offshore Wind	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
Total	0.04	0.03	0.06	0.08	0.09	0.14	0.17	0.19	0.21	0.23	0.25	0.29	0.31

Table 81. Renewable Energy Generation by Fuel  
Mid-America Interconnected Network - 04

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	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
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
Municipal Waste	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17	0.18	0.20
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
Wind	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
Total	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.22	0.24	0.26
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
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
Municipal Waste	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Wood and Other Biomass 4/	1.01	0.97	0.97	0.97	0.98	1.01	1.04	1.06	1.07	1.08	1.09	1.22	1.37
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
Wind	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
Total	1.34	1.30	1.30	1.31	1.31	1.35	1.38	1.40	1.41	1.42	1.43	1.56	1.71
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
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
Wind	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
Total	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Table 81. Renewable Energy Generation by Fuel  
Mid-America Interconnected Network - 04

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	1.0%
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	--
Municipal Waste 3/	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	1.1%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
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	--
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	--
Wind	6.92	7.36	7.78	8.10	8.18	8.80	9.38	9.96	10.03	10.10	10.18	10.25	10.54	17.6%
Offshore Wind	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	--
<b>Total</b>	<b>8.08</b>	<b>8.53</b>	<b>8.94</b>	<b>9.27</b>	<b>9.35</b>	<b>9.97</b>	<b>10.55</b>	<b>11.13</b>	<b>11.20</b>	<b>11.27</b>	<b>11.35</b>	<b>11.42</b>	<b>11.71</b>	<b>10.2%</b>
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	2.3%
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	--
Biogenic Municipal Waste 6/	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	4.1%
Wood and Other Biomass 4/	7.04	8.84	9.89	9.94	9.20	10.30	10.61	10.67	10.61	10.60	10.86	10.68	7.83	31.0%
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	--
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	--
Wind	21.33	22.80	24.19	25.27	25.55	27.63	29.58	31.52	31.77	32.00	32.25	32.49	33.41	22.5%
Offshore Wind	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	--
<b>Total</b>	<b>34.10</b>	<b>37.38</b>	<b>39.82</b>	<b>40.94</b>	<b>40.48</b>	<b>43.66</b>	<b>45.93</b>	<b>47.93</b>	<b>48.11</b>	<b>48.34</b>	<b>48.85</b>	<b>48.90</b>	<b>46.98</b>	<b>11.8%</b>
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	2.3%
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	--
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4.1%
Wood and Other Biomass 4/	0.08	0.10	0.11	0.11	0.10	0.11	0.12	0.12	0.11	0.11	0.12	0.12	0.09	31.5%
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	--
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	--
Wind	0.21	0.23	0.24	0.25	0.26	0.28	0.30	0.32	0.32	0.32	0.32	0.33	0.33	22.5%
Offshore Wind	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	--
<b>Total</b>	<b>0.35</b>	<b>0.39</b>	<b>0.41</b>	<b>0.42</b>	<b>0.42</b>	<b>0.45</b>	<b>0.48</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.51</b>	<b>0.49</b>	<b>11.6%</b>

Table 81. Renewable Energy Generation by Fuel  
Mid-America Interconnected Network - 04

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	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%
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	--
Municipal Waste	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Wood and Other Biomass 4/	0.20	0.23	0.25	0.35	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57	0.57	5.9%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	12.6%
Wind	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	0.6%
<b>Total</b>	<b>0.26</b>	<b>0.28</b>	<b>0.31</b>	<b>0.41</b>	<b>0.62</b>	<b>0.62</b>	<b>0.62</b>	<b>0.62</b>	<b>0.62</b>	<b>0.63</b>	<b>0.63</b>	<b>0.63</b>	<b>0.64</b>	<b>4.9%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	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	--
Municipal Waste	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.0%
Wood and Other Biomass 4/	1.39	1.60	1.81	2.67	4.48	4.48	4.49	4.50	4.51	4.52	4.53	4.54	4.54	6.7%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	13.4%
Wind	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	0.6%
<b>Total</b>	<b>1.72</b>	<b>1.94</b>	<b>2.15</b>	<b>3.01</b>	<b>4.82</b>	<b>4.81</b>	<b>4.83</b>	<b>4.84</b>	<b>4.85</b>	<b>4.87</b>	<b>4.88</b>	<b>4.89</b>	<b>4.90</b>	<b>5.7%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	0.0%
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.1%
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	13.4%
Wind	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	0.6%
<b>Total</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.8%</b>

Table 81. Renewable Energy Generation by Fuel  
Mid-America Interconnected Network - 04

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 82. Renewable Energy Generation by Fuel  
Mid-Continent Area Power Pool - 05

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electric Power Sector 1/</b>													
<b>Generating Capacity (gigawatts)</b>													
Conventional Hydropower	2.90	2.90	2.90	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91
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
Municipal Waste 3/	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Wood and Other Biomass 4/	0.20	0.20	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
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
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
Wind	1.83	2.02	2.66	2.90	3.01	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Offshore Wind	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
Total	5.07	5.28	6.02	6.27	6.38	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
<b>Electricity Generation (billion kilowatthours)</b>													
Conventional Hydropower	7.60	7.96	10.32	11.19	12.27	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
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
Biogenic Municipal Waste 6/	0.47	0.49	0.60	0.60	0.60	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Wood and Other Biomass 4/	0.24	0.25	1.42	1.67	1.67	1.55	1.49	1.45	1.43	1.43	1.44	1.44	1.44
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
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
Wind	3.76	5.16	6.36	7.81	8.28	8.52	8.54	8.54	8.53	8.53	8.54	8.54	8.54
Offshore Wind	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
Total	12.06	13.87	18.70	21.27	22.82	23.69	23.65	23.61	23.59	23.58	23.60	23.60	23.60
<b>Energy Consumption 7/ (quadrillion Btu)</b>													
Conventional Hydropower	0.08	0.08	0.10	0.11	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
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
Biogenic Municipal Waste 6/	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
Wood and Other Biomass 4/	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
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
Wind	0.04	0.05	0.06	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Offshore Wind	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
Total	0.12	0.14	0.19	0.22	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
<b>End-Use Generators 8/</b>													
<b>Generating Capacity (gigawatts)</b>													
Conventional Hydropower 9/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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
Municipal Waste	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
Wood and Other Biomass 4/	0.08	0.08	0.08	0.08	0.08	0.09	0.11	0.12	0.12	0.14	0.14	0.15	0.15
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
Wind	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
Total	0.13	0.14	0.14	0.14	0.14	0.15	0.17	0.18	0.18	0.19	0.20	0.20	0.21

Table 82. Renewable Energy Generation by Fuel  
Mid-Continent Area Power Pool - 05

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Electricity Generation</b> (billion kilowatthours)													
Conventional Hydropower 9/	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
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
Municipal Waste	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
Wood and Other Biomass 4/	0.68	0.67	0.67	0.67	0.69	0.75	0.91	0.93	0.95	1.09	1.11	1.15	1.19
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
Wind	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
Total	0.93	0.93	0.93	0.93	0.95	1.01	1.17	1.19	1.21	1.34	1.37	1.41	1.45
<b>Energy Consumption</b> (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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
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
Wind	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
Total	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02

Table 82. Renewable Energy Generation by Fuel  
Mid-Continent Area Power Pool - 05

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity (gigawatts)</b>														
Conventional Hydropower	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	2.91	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	--
Municipal Waste 3/	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.1%
Wood and Other Biomass 4/	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	1.8%
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	--
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	--
Wind	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	1.7%
Offshore Wind	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	--
Total	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	0.8%
<b>Electricity Generation (billion kilowatthours)</b>														
Conventional Hydropower	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	2.1%
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	--
Biogenic Municipal Waste 6/	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1.0%
Wood and Other Biomass 4/	1.51	1.51	1.40	1.35	1.36	1.36	1.37	1.39	1.39	1.39	1.39	1.30	1.30	7.1%
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	--
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	--
Wind	8.54	8.54	8.54	8.54	8.54	8.53	8.53	8.53	8.54	8.54	8.53	8.54	8.54	2.1%
Offshore Wind	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	--
Total	23.67	23.67	23.56	23.51	23.52	23.52	23.53	23.55	23.55	23.55	23.55	23.46	23.46	2.2%
<b>Energy Consumption 7/ (quadrillion Btu)</b>														
Conventional Hydropower	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	2.1%
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	--
Biogenic Municipal Waste 6/	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	1.0%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	9.5%
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	--
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	--
Wind	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	2.1%
Offshore Wind	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	--
Total	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	2.3%
<b>End-Use Generators 8/</b>														
<b>Generating Capacity (gigawatts)</b>														
Conventional Hydropower 9/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.18	0.23	0.23	0.25	0.36	0.35	0.36	0.36	0.36	0.37	0.37	0.37	0.37	6.7%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	17.8%
Wind	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	0.7%
Total	0.24	0.28	0.29	0.31	0.42	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.44	5.1%



Table 82. Renewable Energy Generation by Fuel  
Mid-Continent Area Power Pool - 05

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electricity Generation</b>														
(billion kilowatthours)														
Conventional Hydropower 9/	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	0.0%
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	- -
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	1.40	1.80	1.85	1.99	2.94	2.85	2.87	2.89	2.91	2.93	2.95	2.96	2.97	6.4%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	18.4%
Wind	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	0.7%
Total	1.66	2.06	2.11	2.25	3.20	3.11	3.13	3.16	3.18	3.20	3.22	3.23	3.25	5.4%
<b>Energy Consumption</b>														
(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	0.0%
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	- -
Municipal Waste	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%
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	5.9%
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	18.4%
Wind	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	0.7%
Total	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	5.0%

Table 82. Renewable Energy Generation by Fuel  
Mid-Continent Area Power Pool - 05

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatt-hours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 Btu per kilowatt-hour.

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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 83. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New York - 06

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	4.30	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
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
Municipal Waste 3/	0.30	0.32	0.32	0.32	0.32	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Wood and Other Biomass 4/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
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
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
Wind	0.19	0.37	0.38	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Offshore Wind	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
Total	4.81	5.02	5.03	5.31	5.31	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	25.70	25.90	24.16	24.11	24.47	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08
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
Biogenic Municipal Waste 6/	1.41	1.46	1.11	1.11	1.11	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
Wood and Other Biomass 4/	0.29	0.30	0.29	0.29	0.67	0.79	1.36	1.62	1.94	2.24	2.33	2.44	2.45
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
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
Wind	0.10	0.66	0.91	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
Offshore Wind	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
Total	27.50	28.32	26.48	27.16	27.90	27.99	28.57	28.82	29.15	29.45	29.54	29.64	29.66
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.26	0.26	0.24	0.24	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
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
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03
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
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
Wind	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Offshore Wind	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
Total	0.28	0.29	0.27	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.30	0.30

Table 83. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New York - 06

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	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
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
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
Wood and Other Biomass 4/	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
Solar Photovoltaic 5/	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Total	0.08	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	0.06	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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
Municipal Waste	0.24	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/	0.24	0.24	0.24	0.24	0.24	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Solar Photovoltaic 5/	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Total	0.56	0.60	0.61	0.62	0.62	0.64	0.65	0.65	0.65	0.65	0.66	0.66	0.67
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
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
Municipal Waste	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
Wood and Other Biomass 4/	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
Wind	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
Total	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

Table 83. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New York - 06

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	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	--
Municipal Waste 3/	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.6%
Wood and Other Biomass 4/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.0%
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	--
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	0.0%
Wind	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	2.5%
Offshore Wind	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	--
Total	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	0.3%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	24.08	-0.3%
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	--
Biogenic Municipal Waste 6/	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	0.0%
Wood and Other Biomass 4/	2.38	2.47	2.49	2.44	2.44	2.49	2.49	2.53	2.58	2.58	2.62	2.62	2.67	9.6%
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	--
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	--
Wind	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	3.9%
Offshore Wind	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	--
Total	29.58	29.67	29.69	29.65	29.65	29.69	29.69	29.74	29.78	29.78	29.83	29.82	29.87	0.2%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	-0.3%
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	--
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Wood and Other Biomass 4/	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	13.4%
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	--
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	--
Wind	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	3.9%
Offshore Wind	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	--
Total	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.3%

Table 83. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New York - 06

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	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	0.0%
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	--
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	0.0%
Wood and Other Biomass 4/	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	0.8%
Solar Photovoltaic 5/	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.15	0.18	0.21	0.24	0.27	13.2%
Wind	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	18.2%
<b>Total</b>	<b>0.14</b>	<b>0.15</b>	<b>0.17</b>	<b>0.18</b>	<b>0.20</b>	<b>0.22</b>	<b>0.24</b>	<b>0.26</b>	<b>0.29</b>	<b>0.32</b>	<b>0.35</b>	<b>0.39</b>	<b>0.43</b>	<b>6.7%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	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	--
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	0.0%
Wood and Other Biomass 4/	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.5%
Solar Photovoltaic 5/	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.19	0.22	0.27	0.31	0.35	0.41	13.8%
Wind	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	18.2%
<b>Total</b>	<b>0.69</b>	<b>0.71</b>	<b>0.74</b>	<b>0.76</b>	<b>0.79</b>	<b>0.81</b>	<b>0.84</b>	<b>0.87</b>	<b>0.92</b>	<b>0.97</b>	<b>1.02</b>	<b>1.07</b>	<b>1.14</b>	<b>2.7%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	0.0%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	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	0.7%
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	13.8%
Wind	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	18.2%
<b>Total</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.9%</b>

Table 83. Renewable Energy Generation by Fuel  
Northeast Power Coordinating Council / New York - 06

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 84. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New England - 07

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
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
Municipal Waste 3/	0.54	0.54	0.54	0.54	0.54	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Wood and Other Biomass 4/	0.54	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
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
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
Wind	0.01	0.01	0.07	0.19	0.19	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
Offshore Wind	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
Total	2.92	2.98	3.05	3.16	3.16	5.51	5.51	5.51	5.51	5.51	5.51	5.51	5.51
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	7.98	8.18	6.04	6.10	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29
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
Biogenic Municipal Waste 6/	2.47	2.63	2.33	2.33	2.33	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49
Wood and Other Biomass 4/	3.07	3.24	1.52	1.53	1.56	1.64	1.70	1.80	1.90	2.02	2.17	2.31	2.44
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
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
Wind	0.01	0.01	0.18	0.34	0.61	9.38	9.38	9.38	9.38	9.38	9.38	9.38	9.38
Offshore Wind	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
Total	13.53	14.06	10.07	10.31	10.79	19.80	19.86	19.96	20.05	20.18	20.33	20.47	20.60
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
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
Biogenic Municipal Waste 6/	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Wood and Other Biomass 4/	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
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
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
Wind	0.00	0.00	0.00	0.00	0.01	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Offshore Wind	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
Total	0.14	0.15	0.11	0.12	0.12	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22



Table 84. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New England - 07

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
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
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
Wood and Other Biomass 4/	0.47	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Solar Photovoltaic 5/	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
Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Total	0.62	0.55	0.55	0.55	0.55	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	0.70	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
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
Municipal Waste	0.26	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Wood and Other Biomass 4/	2.26	2.12	2.12	2.12	2.12	2.16	2.18	2.18	2.18	2.18	2.18	2.18	2.19
Solar Photovoltaic 5/	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
Wind	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
Total	3.23	3.14	3.14	3.14	3.14	3.18	3.20	3.20	3.20	3.20	3.20	3.21	3.21
Energy Consumption (quadrillion Btu)													
Conventional Hydropower 9/	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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
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
Wind	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
Total	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

Table 84. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New England - 07

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	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	--
Municipal Waste 3/	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.2%
Wood and Other Biomass 4/	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.0%
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	--
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	0.0%
Wind	2.52	2.52	2.52	2.54	2.54	2.54	2.54	2.56	2.56	2.59	2.59	2.59	2.64	25.9%
Offshore Wind	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	--
Total	5.51	5.51	5.51	5.53	5.53	5.53	5.53	5.56	5.56	5.58	5.58	5.58	5.64	2.7%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	-1.1%
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	--
Biogenic Municipal Waste 6/	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	-0.2%
Wood and Other Biomass 4/	2.49	2.52	2.52	2.50	2.49	2.50	2.50	2.49	2.52	2.58	2.63	2.67	2.67	-0.8%
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	--
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	--
Wind	9.38	9.38	9.38	9.44	9.44	9.44	9.44	9.52	9.52	9.61	9.61	9.61	9.79	32.7%
Offshore Wind	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	--
Total	20.65	20.68	20.67	20.72	20.71	20.72	20.72	20.78	20.81	20.98	21.02	21.06	21.24	1.7%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	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	-1.1%
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	--
Biogenic Municipal Waste 6/	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	-0.2%
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	1.1%
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	--
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	--
Wind	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	32.7%
Offshore Wind	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	--
Total	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	1.9%

Table 84. Renewable Energy Generation by Fuel  
 Northeast Power Coordinating Council / New England - 07

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	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	--
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	0.0%
Wood and Other Biomass 4/	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.2%
Solar Photovoltaic 5/	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.10	0.12	14.6%
Wind	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	7.8%
<b>Total</b>	<b>0.57</b>	<b>0.58</b>	<b>0.58</b>	<b>0.58</b>	<b>0.59</b>	<b>0.59</b>	<b>0.60</b>	<b>0.62</b>	<b>0.63</b>	<b>0.64</b>	<b>0.65</b>	<b>0.68</b>	<b>0.70</b>	<b>1.0%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	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	--
Municipal Waste	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.0%
Wood and Other Biomass 4/	2.19	2.20	2.21	2.21	2.22	2.22	2.22	2.23	2.23	2.23	2.23	2.23	2.23	0.2%
Solar Photovoltaic 5/	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.17	15.3%
Wind	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	7.8%
<b>Total</b>	<b>3.22</b>	<b>3.23</b>	<b>3.24</b>	<b>3.25</b>	<b>3.26</b>	<b>3.27</b>	<b>3.29</b>	<b>3.31</b>	<b>3.33</b>	<b>3.35</b>	<b>3.37</b>	<b>3.40</b>	<b>3.44</b>	<b>0.4%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
Conventional Hydropower 9/	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	0.0%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.2%
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	15.3%
Wind	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	7.8%
<b>Total</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.2%</b>

Table 84. Renewable Energy Generation by Fuel  
Northeast Power Coordinating Council / New England - 07

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 85. Renewable Energy Generation by Fuel  
 Florida Reliability Coordinating Council - 08

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	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
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
Municipal Waste 3/	0.44	0.44	0.46	0.46	0.46	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Wood and Other Biomass 4/	0.14	0.14	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
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
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
Wind	0.00	0.00	0.00	0.00	0.00	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Offshore Wind	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
Total	0.64	0.64	0.70	0.70	0.70	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	0.27	0.22	0.15	0.11	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
Biogenic Municipal Waste 6/	2.06	2.20	1.72	1.72	1.72	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Wood and Other Biomass 4/	0.48	0.49	1.00	1.00	0.98	1.00	0.99	1.13	1.31	1.33	1.75	1.77	1.57
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
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
Wind	0.00	0.00	0.00	0.00	0.00	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Offshore Wind	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
Total	2.80	2.90	2.87	2.83	2.76	4.04	4.04	4.18	4.35	4.37	4.79	4.82	4.61
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	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
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
Biogenic Municipal Waste 6/	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Wood and Other Biomass 4/	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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
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
Wind	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
Offshore Wind	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
Total	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06

Table 85. Renewable Energy Generation by Fuel  
 Florida Reliability Coordinating Council - 08

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Wood and Other Biomass 4/	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21
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
Wind	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
Total	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.25
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
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
Municipal Waste	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Wood and Other Biomass 4/	1.09	1.12	1.12	1.13	1.13	1.17	1.20	1.20	1.22	1.23	1.25	1.26	1.30
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
Wind	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
Total	1.38	1.41	1.41	1.42	1.42	1.46	1.49	1.50	1.52	1.53	1.54	1.55	1.59
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
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
Municipal Waste	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
Wood and Other Biomass 4/	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
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
Wind	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
Total	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Table 85. Renewable Energy Generation by Fuel  
 Florida Reliability Coordinating Council - 08

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	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	0.0%
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	--
Municipal Waste 3/	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.3%
Wood and Other Biomass 4/	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	1.0%
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	--
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	--
Wind	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	--
Offshore Wind	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	--
Total	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	2.0%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-10.1%
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	--
Biogenic Municipal Waste 6/	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	-0.7%
Wood and Other Biomass 4/	1.73	1.73	1.78	1.74	1.79	1.86	1.86	1.86	1.86	1.74	1.78	1.51	1.11	3.4%
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	--
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	--
Wind	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	--
Offshore Wind	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	--
Total	4.77	4.77	4.82	4.78	4.83	4.91	4.91	4.91	4.90	4.78	4.82	4.55	4.15	1.5%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	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	-10.1%
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	--
Biogenic Municipal Waste 6/	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	-0.7%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	8.5%
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	--
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	--
Wind	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	--
Offshore Wind	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	--
Total	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	1.9%

Table 85. Renewable Energy Generation by Fuel  
 Florida Reliability Coordinating Council - 08

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	--
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	--
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	0.0%
Wood and Other Biomass 4/	0.22	0.23	0.25	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.29	1.8%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	14.0%
Wind	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	1.0%
<b>Total</b>	<b>0.25</b>	<b>0.27</b>	<b>0.29</b>	<b>0.30</b>	<b>0.30</b>	<b>0.31</b>	<b>0.31</b>	<b>0.31</b>	<b>0.32</b>	<b>0.32</b>	<b>0.33</b>	<b>0.34</b>	<b>0.34</b>	<b>1.8%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
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	--
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	--
Municipal Waste	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.0%
Wood and Other Biomass 4/	1.32	1.44	1.60	1.68	1.71	1.72	1.73	1.75	1.77	1.79	1.80	1.82	1.83	2.1%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	14.6%
Wind	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	1.0%
<b>Total</b>	<b>1.61</b>	<b>1.73</b>	<b>1.90</b>	<b>1.97</b>	<b>2.01</b>	<b>2.01</b>	<b>2.03</b>	<b>2.05</b>	<b>2.07</b>	<b>2.09</b>	<b>2.11</b>	<b>2.13</b>	<b>2.15</b>	<b>1.8%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	--
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.2%
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	14.6%
Wind	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	1.0%
<b>Total</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.9%</b>



Table 85. Renewable Energy Generation by Fuel  
Florida Reliability Coordinating Council - 08

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 86. Renewable Energy Generation by Fuel  
Southeastern Electric Reliability Council - 09

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16
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
Municipal Waste 3/	0.20	0.23	0.23	0.23	0.23	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Wood and Other Biomass 4/	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
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
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
Wind	0.03	0.03	0.08	0.12	0.12	0.12	0.12	0.12	0.31	0.31	0.31	0.31	0.31
Offshore Wind	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
Total	12.57	12.60	12.67	12.71	12.71	12.73	12.73	12.73	12.92	12.92	12.92	12.92	12.92
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	34.47	26.80	33.94	34.27	35.23	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13
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
Biogenic Municipal Waste 6/	0.78	0.87	1.07	1.07	1.07	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Wood and Other Biomass 4/	1.40	1.48	1.53	1.63	1.58	1.68	1.62	1.98	2.94	3.91	4.89	6.82	7.66
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
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
Wind	0.00	0.02	0.10	0.23	0.32	0.32	0.32	0.32	0.94	0.94	0.94	0.94	0.94
Offshore Wind	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
Total	36.66	29.17	36.65	37.20	38.20	38.39	38.33	38.68	40.27	41.23	42.22	44.14	44.98
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.35	0.27	0.34	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
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
Biogenic Municipal Waste 6/	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.07	0.08
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
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
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
Offshore Wind	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
Total	0.37	0.29	0.38	0.38	0.39	0.39	0.39	0.40	0.41	0.42	0.43	0.45	0.46

Table 86. Renewable Energy Generation by Fuel  
Southeastern Electric Reliability Council - 09

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
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
Municipal Waste	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Wood and Other Biomass 4/	2.66	2.66	2.68	2.68	2.69	2.81	2.87	2.91	2.94	2.97	3.01	3.06	3.13
Solar Photovoltaic 5/	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
Wind	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
Total	3.06	3.07	3.08	3.09	3.09	3.21	3.28	3.32	3.35	3.38	3.42	3.47	3.53
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	1.50	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
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
Municipal Waste	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Wood and Other Biomass 4/	16.39	16.72	16.79	16.83	16.83	17.61	17.97	18.18	18.40	18.57	18.82	19.09	19.54
Solar Photovoltaic 5/	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
Wind	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
Total	18.24	18.34	18.42	18.45	18.46	19.23	19.60	19.80	20.02	20.20	20.45	20.72	21.17
Energy Consumption (quadrillion Btu)													
Conventional Hydropower 9/	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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.21	0.21	0.21	0.21	0.21	0.22	0.23	0.23	0.24	0.24	0.24	0.24	0.25
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
Wind	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
Total	0.23	0.23	0.23	0.23	0.23	0.24	0.25	0.25	0.26	0.26	0.26	0.26	0.27

Table 86. Renewable Energy Generation by Fuel  
Southeastern Electric Reliability Council - 09

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	12.16	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	--
Municipal Waste 3/	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	0.5%
Wood and Other Biomass 4/	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	0.3%
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	--
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	--
Wind	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.34	10.7%
Offshore Wind	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	--
Total	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.92	12.95	0.1%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	35.13	1.1%
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	--
Biogenic Municipal Waste 6/	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.6%
Wood and Other Biomass 4/	9.61	10.94	10.45	10.26	10.05	10.35	10.33	10.18	10.26	10.44	10.65	10.76	10.88	8.7%
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	--
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	--
Wind	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	1.03	17.4%
Offshore Wind	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	--
Total	46.93	48.27	47.77	47.58	47.38	47.67	47.65	47.50	47.58	47.76	47.97	48.08	48.29	2.1%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	1.1%
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	--
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.6%
Wood and Other Biomass 4/	0.10	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	9.8%
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	--
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	--
Wind	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	17.4%
Offshore Wind	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	--
Total	0.48	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.50	2.2%

Table 86. Renewable Energy Generation by Fuel  
Southeastern Electric Reliability Council - 09

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	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	--
Municipal Waste	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.0%
Wood and Other Biomass 4/	3.18	3.33	3.57	3.88	4.09	4.11	4.17	4.23	4.28	4.34	4.39	4.44	4.49	2.2%
Solar Photovoltaic 5/	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.08	0.09	15.4%
Wind	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	0.6%
<b>Total</b>	<b>3.59</b>	<b>3.74</b>	<b>3.98</b>	<b>4.29</b>	<b>4.50</b>	<b>4.53</b>	<b>4.59</b>	<b>4.66</b>	<b>4.72</b>	<b>4.79</b>	<b>4.86</b>	<b>4.92</b>	<b>4.98</b>	<b>2.0%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	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	--
Municipal Waste	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.0%
Wood and Other Biomass 4/	19.87	20.96	22.89	25.40	27.06	27.07	27.42	27.76	28.10	28.43	28.73	28.99	29.28	2.4%
Solar Photovoltaic 5/	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.07	0.08	0.11	0.13	0.16	16.1%
Wind	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.6%
<b>Total</b>	<b>21.50</b>	<b>22.59</b>	<b>24.53</b>	<b>27.04</b>	<b>28.70</b>	<b>28.72</b>	<b>29.07</b>	<b>29.43</b>	<b>29.78</b>	<b>30.13</b>	<b>30.45</b>	<b>30.74</b>	<b>31.06</b>	<b>2.2%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
Conventional Hydropower 9/	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	0.0%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.26	0.27	0.29	0.32	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35	0.36	2.2%
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	16.1%
Wind	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	0.6%
<b>Total</b>	<b>0.28</b>	<b>0.29</b>	<b>0.31</b>	<b>0.34</b>	<b>0.34</b>	<b>0.34</b>	<b>0.35</b>	<b>0.35</b>	<b>0.36</b>	<b>0.36</b>	<b>0.37</b>	<b>0.37</b>	<b>0.38</b>	<b>2.0%</b>

Table 86. Renewable Energy Generation by Fuel  
Southeastern Electric Reliability Council - 09

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 87. Renewable Energy Generation by Fuel  
Southwest Power Pool - 10

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
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
Municipal Waste 3/	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
Wood and Other Biomass 4/	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 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
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Wind	0.95	1.30	1.56	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Offshore Wind	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
Total	3.51	3.85	4.12	4.27	4.27	4.27	4.28	4.28	4.28	4.28	4.28	4.28	4.29
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	6.47	2.90	5.84	5.88	6.06	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05
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
Biogenic Municipal Waste 6/	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood and Other Biomass 4/	0.00	0.00	0.14	0.14	0.13	0.13	0.14	0.14	0.14	0.15	0.14	0.14	0.14
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
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04
Wind	1.56	3.58	3.77	4.31	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56
Offshore Wind	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
Total	8.20	6.49	9.76	10.34	10.75	10.75	10.76	10.76	10.76	10.77	10.77	10.78	10.78
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.06	0.03	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
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
Biogenic Municipal Waste 6/	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
Wood and Other Biomass 4/	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 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
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
Wind	0.02	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Offshore Wind	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
Total	0.08	0.07	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

Table 87. Renewable Energy Generation by Fuel  
Southwest Power Pool - 10

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.33	0.33	0.34	0.34	0.34	0.36	0.37	0.38	0.38	0.39	0.40	0.40	0.41
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
Wind	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
Total	0.33	0.34	0.35	0.35	0.35	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.42
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
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
Municipal Waste	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
Wood and Other Biomass 4/	2.27	2.32	2.37	2.38	2.38	2.49	2.56	2.60	2.62	2.65	2.69	2.74	2.78
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
Wind	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
Total	2.28	2.34	2.39	2.40	2.40	2.51	2.58	2.62	2.64	2.67	2.71	2.76	2.81
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
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
Wind	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
Total	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04



Table 87. Renewable Energy Generation by Fuel  
Southwest Power Pool - 10

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	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	--
Municipal Waste 3/	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	2.5%
Wood and Other Biomass 4/	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 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	--
Solar Photovoltaic 5/	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	--
Wind	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.2%
Offshore Wind	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	--
Total	4.29	4.29	4.29	4.30	4.30	4.30	4.30	4.31	4.31	4.31	4.31	4.32	4.32	0.5%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05	3.1%
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	--
Biogenic Municipal Waste 6/	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	--
Wood and Other Biomass 4/	0.15	0.72	0.74	0.73	0.67	0.66	0.62	0.61	0.62	0.62	0.58	0.55	0.14	--
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	--
Solar Photovoltaic 5/	0.05	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.10	0.11	0.11	0.12	--
Wind	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	1.0%
Offshore Wind	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	--
Total	10.80	11.37	11.40	11.40	11.35	11.34	11.30	11.31	11.31	11.32	11.29	11.26	10.86	2.2%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	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	3.1%
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	--
Biogenic Municipal Waste 6/	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	--
Wood and Other Biomass 4/	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	--
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	--
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	--
Wind	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	1.0%
Offshore Wind	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	--
Total	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	2.2%

Table 87. Renewable Energy Generation by Fuel  
Southwest Power Pool - 10

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.42	0.43	0.48	0.60	0.64	0.64	0.65	0.66	0.67	0.68	0.69	0.70	0.70	3.2%
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	16.9%
Wind	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	0.6%
<b>Total</b>	<b>0.43</b>	<b>0.44</b>	<b>0.49</b>	<b>0.61</b>	<b>0.65</b>	<b>0.65</b>	<b>0.66</b>	<b>0.68</b>	<b>0.69</b>	<b>0.70</b>	<b>0.72</b>	<b>0.73</b>	<b>0.74</b>	<b>3.3%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
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	--
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	2.84	2.91	3.30	4.34	4.62	4.58	4.64	4.70	4.76	4.82	4.87	4.91	4.96	3.2%
Solar Photovoltaic 5/	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.06	17.6%
Wind	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	0.6%
<b>Total</b>	<b>2.87</b>	<b>2.93</b>	<b>3.33</b>	<b>4.37</b>	<b>4.64</b>	<b>4.61</b>	<b>4.67</b>	<b>4.74</b>	<b>4.80</b>	<b>4.87</b>	<b>4.93</b>	<b>4.98</b>	<b>5.04</b>	<b>3.2%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	1.8%
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	17.6%
Wind	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	0.6%
<b>Total</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>1.8%</b>

Table 87. Renewable Energy Generation by Fuel  
Southwest Power Pool - 10

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 88. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.28	34.28	34.28	34.28	34.28
Geothermal 2/	0.21	0.26	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.33
Municipal Waste 3/	0.08	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Wood and Other Biomass 4/	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
Solar Thermal	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
Solar Photovoltaic 5/	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04
Wind	1.08	1.69	2.25	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53
Offshore Wind	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
Total	35.73	36.42	37.02	38.31	38.31	38.32	38.32	38.33	38.46	38.47	38.47	38.48	38.52
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	120.25	139.66	119.65	126.05	135.08	140.25	145.46	145.46	146.36	146.36	146.36	146.36	146.36
Geothermal 2/	1.38	1.53	2.19	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.74
Biogenic Municipal Waste 6/	0.20	0.22	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Wood and Other Biomass 4/	1.44	1.43	1.25	1.25	1.24	1.20	1.20	1.20	1.17	1.17	1.20	2.31	2.23
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03
Solar Photovoltaic 5/	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
Wind	2.13	3.22	6.55	9.40	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.78	11.78
Offshore Wind	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
Total	125.41	146.07	130.33	139.89	151.30	156.44	161.66	161.66	162.54	162.55	162.59	163.73	163.92
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	1.21	1.40	1.20	1.26	1.35	1.41	1.46	1.46	1.47	1.47	1.47	1.47	1.47
Geothermal 2/	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
Biogenic Municipal Waste 6/	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
Wood and Other Biomass 4/	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
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
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
Wind	0.02	0.03	0.07	0.09	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Offshore Wind	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
Total	1.27	1.48	1.34	1.44	1.55	1.60	1.66	1.66	1.67	1.67	1.67	1.68	1.69

Table 88. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.41	0.40	0.40	0.41	0.41	0.43	0.44	0.45	0.45	0.46	0.49	0.50	0.50
Solar Photovoltaic 5/	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Wind	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
Total	0.45	0.45	0.46	0.46	0.47	0.49	0.50	0.51	0.52	0.52	0.55	0.56	0.57
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	0.21	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
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
Municipal Waste	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
Wood and Other Biomass 4/	2.01	1.93	1.93	1.93	1.95	2.07	2.17	2.21	2.24	2.27	2.51	2.56	2.60
Solar Photovoltaic 5/	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
Wind	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
Total	2.27	2.25	2.27	2.28	2.30	2.42	2.52	2.57	2.59	2.63	2.88	2.92	2.97
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
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
Wind	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
Total	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

Table 88. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	34.39	0.0%
Geothermal 2/	0.34	0.34	0.43	0.43	0.48	0.53	0.57	0.63	0.67	0.71	0.74	0.74	0.79	4.8%
Municipal Waste 3/	0.13	0.13	0.16	0.16	0.17	0.17	0.20	0.20	0.20	0.20	0.21	0.21	0.21	2.2%
Wood and Other Biomass 4/	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.25	0.25	0.25	0.25	0.25	0.30	1.7%
Solar Thermal	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	--
Solar Photovoltaic 5/	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.09	0.10	42.3%
Wind	3.53	3.53	4.87	4.87	4.99	5.09	5.17	5.37	5.50	5.60	5.66	5.71	5.83	5.3%
Offshore Wind	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	--
Total	38.64	38.64	40.12	40.12	40.32	40.48	40.62	40.94	41.12	41.26	41.36	41.42	41.65	0.6%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	147.05	0.2%
Geothermal 2/	2.77	2.77	3.51	3.51	3.93	4.32	4.57	5.05	5.41	5.73	5.95	5.95	6.33	6.1%
Biogenic Municipal Waste 6/	0.69	0.69	0.93	0.93	1.04	1.04	1.28	1.30	1.31	1.31	1.32	1.32	1.32	7.7%
Wood and Other Biomass 4/	1.60	1.82	2.61	2.70	1.98	1.56	1.38	2.53	2.06	1.87	1.84	1.82	2.00	1.4%
Solar Thermal	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10	--
Solar Photovoltaic 5/	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	--
Wind	11.78	11.78	17.02	17.02	17.50	17.91	18.21	19.02	19.50	19.89	20.15	20.35	20.81	8.1%
Offshore Wind	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	--
Total	164.02	164.25	171.27	171.36	171.68	172.08	172.70	175.18	175.57	176.11	176.58	176.78	177.82	0.8%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	0.2%
Geothermal 2/	0.06	0.06	0.08	0.08	0.10	0.11	0.12	0.13	0.15	0.16	0.16	0.16	0.18	7.3%
Biogenic Municipal Waste 6/	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	7.7%
Wood and Other Biomass 4/	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	4.9%
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	--
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	--
Wind	0.12	0.12	0.17	0.17	0.18	0.18	0.18	0.19	0.20	0.20	0.20	0.20	0.21	8.1%
Offshore Wind	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	--
Total	1.69	1.69	1.78	1.78	1.79	1.80	1.81	1.85	1.86	1.88	1.89	1.89	1.91	1.1%

Table 88. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Northwest Power Pool Area - 11

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	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%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.57	0.58	0.62	0.64	0.66	0.67	0.67	0.69	0.70	0.71	0.72	0.73	0.74	2.6%
Solar Photovoltaic 5/	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.11	12.5%
Wind	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	0.1%
<b>Total</b>	<b>0.64</b>	<b>0.66</b>	<b>0.70</b>	<b>0.73</b>	<b>0.75</b>	<b>0.76</b>	<b>0.77</b>	<b>0.80</b>	<b>0.81</b>	<b>0.83</b>	<b>0.85</b>	<b>0.87</b>	<b>0.89</b>	<b>2.9%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	3.12	3.17	3.49	3.67	3.80	3.83	3.84	3.96	4.01	4.07	4.13	4.18	4.24	3.3%
Solar Photovoltaic 5/	0.05	0.06	0.07	0.07	0.08	0.09	0.10	0.11	0.13	0.15	0.16	0.18	0.21	13.2%
Wind	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	0.1%
<b>Total</b>	<b>3.49</b>	<b>3.55</b>	<b>3.87</b>	<b>4.06</b>	<b>4.20</b>	<b>4.24</b>	<b>4.26</b>	<b>4.39</b>	<b>4.45</b>	<b>4.53</b>	<b>4.61</b>	<b>4.68</b>	<b>4.77</b>	<b>3.2%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	0.0%
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	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	3.5%
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	13.2%
Wind	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	0.1%
<b>Total</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>3.2%</b>

Table 88. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / Northwest Power Pool Area - 11

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.



Table 89. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	5.41	5.41	5.42	5.42	5.42	5.42	5.47	5.47	5.47	5.47	5.47	5.47	5.47
Geothermal 2/	0.11	0.12	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Municipal Waste 3/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	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
Solar Thermal	0.00	0.00	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Solar Photovoltaic 5/	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05
Wind	0.54	0.69	1.46	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.58
Offshore Wind	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
Total	6.12	6.29	7.24	7.30	7.30	7.31	7.36	7.37	7.37	7.37	7.38	7.38	7.47
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	12.12	13.11	12.77	13.38	14.29	14.78	15.11	15.11	15.11	15.11	15.11	15.11	15.11
Geothermal 2/	0.86	0.99	0.92	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
Biogenic Municipal Waste 6/	0.08	0.06	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Wood and Other Biomass 4/	0.01	0.01	0.15	0.32	0.32	0.32	0.32	0.32	0.32	0.32	2.27	2.62	2.86
Solar Thermal	0.00	0.00	0.22	0.43	0.44	0.44	0.44	0.45	0.45	0.45	0.46	0.46	0.46
Solar Photovoltaic 5/	0.01	0.01	0.05	0.07	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.13	0.14
Wind	1.66	2.05	2.38	3.62	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.97
Offshore Wind	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
Total	14.74	16.22	16.59	19.04	20.02	20.51	20.86	20.87	20.88	20.89	22.86	23.21	23.76
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.12	0.13	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Geothermal 2/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Biogenic Municipal Waste 6/	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
Wood and Other Biomass 4/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.03
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
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
Wind	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Offshore Wind	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
Total	0.16	0.17	0.18	0.20	0.21	0.22	0.22	0.22	0.22	0.22	0.24	0.25	0.25

Table 89. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste	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
Wood and Other Biomass 4/	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/	0.01	0.01	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Wind	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
Total	0.01	0.02	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06
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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Solar Photovoltaic 5/	0.01	0.02	0.04	0.05	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.09	0.09
Wind	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
Total	0.03	0.04	0.06	0.07	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.11	0.11
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
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
Municipal Waste	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
Wood and Other Biomass 4/	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
Wind	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
Total	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

Table 89. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.47	0.0%
Geothermal 2/	0.15	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	1.7%
Municipal Waste 3/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Wood and Other Biomass 4/	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.14	0.14	0.14	0.14	0.14	0.19	9.2%
Solar Thermal	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	17.8%
Solar Photovoltaic 5/	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	7.1%
Wind	1.58	1.70	1.73	1.73	1.76	1.80	1.83	1.86	1.86	1.86	1.86	1.86	1.86	4.2%
Offshore Wind	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	--
Total	7.48	7.62	7.66	7.66	7.70	7.73	7.82	7.90	7.90	7.90	7.91	7.91	7.97	1.0%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	0.6%
Geothermal 2/	1.12	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.2%
Biogenic Municipal Waste 6/	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	2.5%
Wood and Other Biomass 4/	3.41	3.38	5.77	5.93	6.92	7.48	8.05	8.41	8.65	8.89	9.16	9.39	9.65	32.1%
Solar Thermal	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.50	--
Solar Photovoltaic 5/	0.14	0.15	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.22	0.23	13.5%
Wind	3.97	4.35	4.45	4.45	4.54	4.62	4.73	4.81	4.81	4.81	4.81	4.81	4.81	3.6%
Offshore Wind	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	--
Total	24.32	24.88	27.38	27.54	28.64	29.30	29.98	30.43	30.68	30.93	31.21	31.45	31.72	2.8%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.6%
Geothermal 2/	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	2.2%
Biogenic Municipal Waste 6/	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	2.5%
Wood and Other Biomass 4/	0.04	0.04	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	32.3%
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	--
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	13.5%
Wind	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	3.6%
Offshore Wind	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	--
Total	0.26	0.27	0.30	0.30	0.31	0.32	0.33	0.33	0.33	0.33	0.34	0.34	0.34	2.9%

Table 89. Renewable Energy Generation by Fuel  
 Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	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	1.4%
Solar Photovoltaic 5/	0.06	0.06	0.07	0.08	0.08	0.09	0.10	0.11	0.13	0.14	0.16	0.18	0.20	12.7%
Wind	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%
<b>Total</b>	<b>0.06</b>	<b>0.07</b>	<b>0.07</b>	<b>0.08</b>	<b>0.09</b>	<b>0.10</b>	<b>0.11</b>	<b>0.12</b>	<b>0.13</b>	<b>0.15</b>	<b>0.17</b>	<b>0.18</b>	<b>0.20</b>	<b>11.0%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.0%
Solar Photovoltaic 5/	0.10	0.11	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.27	0.30	0.34	0.38	13.4%
Wind	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%
<b>Total</b>	<b>0.12</b>	<b>0.13</b>	<b>0.15</b>	<b>0.16</b>	<b>0.18</b>	<b>0.19</b>	<b>0.21</b>	<b>0.23</b>	<b>0.26</b>	<b>0.30</b>	<b>0.33</b>	<b>0.37</b>	<b>0.41</b>	<b>10.4%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	--
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	--
Municipal Waste	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%
Wood and Other Biomass 4/	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	1.2%
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	13.4%
Wind	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%
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.8%</b>

Table 89. Renewable Energy Generation by Fuel

Western Electricity Coordinating Council / Rocky Mountain Power Area and Arizona-New Mexico-Southern Nevada Power Area - 12

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 90. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / California - 13

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	9.87	9.87	9.87	9.87	9.87	9.87	9.93	9.93	9.93	9.93	9.93	9.93	9.93
Geothermal 2/	1.91	1.91	1.91	1.94	1.96	2.04	2.17	2.27	2.32	2.37	2.42	2.44	2.49
Municipal Waste 3/	0.32	0.34	0.34	0.34	0.34	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Wood and Other Biomass 4/	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Solar Thermal	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.48	0.56	0.64	0.65	0.65	0.65
Solar Photovoltaic 5/	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05
Wind	2.18	2.39	2.43	2.63	2.90	3.15	3.15	3.15	3.15	3.15	3.15	3.19	3.23
Offshore Wind	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
Total	15.08	15.32	15.36	15.59	15.89	16.40	16.60	16.78	16.91	17.05	17.10	17.16	17.26
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	38.65	47.35	33.26	34.59	36.66	37.66	38.03	38.03	38.03	38.03	38.03	38.03	38.03
Geothermal 2/	12.23	12.11	12.86	13.00	13.20	13.69	14.77	15.76	16.16	16.55	16.94	17.09	17.48
Biogenic Municipal Waste 6/	1.20	1.35	1.40	1.40	1.40	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83
Wood and Other Biomass 4/	2.33	2.42	2.67	2.67	2.65	2.65	2.65	2.65	2.65	2.65	2.61	2.44	2.47
Solar Thermal	0.54	0.49	0.70	0.70	0.70	0.71	0.71	0.97	1.23	1.49	1.50	1.50	1.51
Solar Photovoltaic 5/	0.00	0.00	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.11
Wind	4.01	4.72	5.62	5.90	6.59	7.42	7.95	7.96	7.96	7.95	7.96	8.08	8.22
Offshore Wind	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
Total	58.95	68.45	56.53	58.28	61.24	65.00	66.99	68.26	68.92	69.58	69.96	70.07	70.66
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	0.39	0.47	0.33	0.35	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Geothermal 2/	0.26	0.25	0.27	0.27	0.28	0.30	0.33	0.37	0.38	0.39	0.40	0.41	0.42
Biogenic Municipal Waste 6/	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Wood and Other Biomass 4/	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Solar Thermal	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
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
Wind	0.04	0.05	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Offshore Wind	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
Total	0.73	0.82	0.73	0.75	0.79	0.84	0.89	0.92	0.93	0.95	0.96	0.96	0.98

Table 90. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / California - 13

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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
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
Municipal Waste	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Wood and Other Biomass 4/	0.16	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17
Solar Photovoltaic 5/	0.14	0.21	0.34	0.45	0.46	0.50	0.51	0.52	0.53	0.54	0.58	0.62	0.66
Wind	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
Total	0.41	0.48	0.62	0.72	0.73	0.78	0.79	0.80	0.81	0.82	0.86	0.91	0.95
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	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
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
Municipal Waste	0.73	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Wood and Other Biomass 4/	0.69	0.67	0.67	0.67	0.68	0.71	0.72	0.73	0.73	0.74	0.75	0.75	0.76
Solar Photovoltaic 5/	0.23	0.33	0.56	0.73	0.75	0.82	0.84	0.85	0.87	0.88	0.95	1.03	1.10
Wind	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
Total	1.66	1.81	2.04	2.21	2.24	2.34	2.37	2.39	2.41	2.43	2.51	2.59	2.67
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
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
Municipal Waste	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Wood and Other Biomass 4/	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
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
Wind	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
Total	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

Table 90. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / California - 13

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	9.93	9.93	9.93	9.93	9.93	9.93	9.93	9.93	9.93	9.93	9.93	9.98	9.98	0.0%
Geothermal 2/	2.54	2.62	2.67	2.72	2.77	2.85	2.92	2.97	3.01	3.06	3.11	3.16	3.21	2.2%
Municipal Waste 3/	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	1.8%
Wood and Other Biomass 4/	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.0%
Solar Thermal	0.65	0.65	0.65	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.67	0.67	0.67	2.2%
Solar Photovoltaic 5/	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.10	0.11	0.12	0.12	10.4%
Wind	3.28	3.32	3.37	3.42	3.48	3.55	3.63	3.72	3.82	3.82	5.21	5.21	5.21	3.3%
Offshore Wind	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	--
Total	17.37	17.50	17.60	17.71	17.82	17.98	18.14	18.29	18.44	18.50	19.94	20.05	20.11	1.1%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	38.03	38.03	38.03	38.03	38.03	38.03	38.03	38.03	38.03	38.03	38.03	38.36	38.36	-0.9%
Geothermal 2/	17.87	18.50	18.89	19.27	19.65	20.28	20.85	21.22	21.58	21.98	22.34	22.73	23.13	2.7%
Biogenic Municipal Waste 6/	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	3.1%
Wood and Other Biomass 4/	2.61	2.56	2.39	2.47	2.47	2.54	2.61	2.50	2.50	2.56	2.56	2.56	2.65	0.4%
Solar Thermal	1.51	1.52	1.52	1.53	1.53	1.54	1.54	1.55	1.56	1.56	1.57	1.57	1.58	5.0%
Solar Photovoltaic 5/	0.12	0.14	0.15	0.17	0.18	0.20	0.22	0.23	0.25	0.26	0.28	0.29	0.31	23.4%
Wind	8.38	8.53	8.68	8.85	9.05	9.28	9.56	9.88	10.20	10.20	14.89	14.89	14.89	4.9%
Offshore Wind	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	--
Total	71.37	72.10	72.50	73.14	73.75	74.69	75.64	76.24	76.95	77.42	82.50	83.24	83.74	0.8%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	-0.9%
Geothermal 2/	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.53	0.54	0.56	0.57	0.58	0.59	3.6%
Biogenic Municipal Waste 6/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	3.1%
Wood and Other Biomass 4/	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	2.5%
Solar Thermal	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	5.0%
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	23.4%
Wind	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.15	0.15	0.15	4.9%
Offshore Wind	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	--
Total	0.99	1.01	1.02	1.04	1.05	1.08	1.10	1.11	1.13	1.14	1.20	1.21	1.23	1.7%



Table 90. Renewable Energy Generation by Fuel  
Western Electricity Coordinating Council / California - 13

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
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	0.0%
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	--
Municipal Waste	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.0%
Wood and Other Biomass 4/	0.17	0.17	0.19	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	1.4%
Solar Photovoltaic 5/	0.71	0.75	0.80	0.86	0.92	0.99	1.06	1.14	1.19	1.24	1.30	1.37	1.44	8.4%
Wind	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	0.0%
<b>Total</b>	<b>1.00</b>	<b>1.04</b>	<b>1.11</b>	<b>1.17</b>	<b>1.24</b>	<b>1.31</b>	<b>1.38</b>	<b>1.46</b>	<b>1.51</b>	<b>1.57</b>	<b>1.63</b>	<b>1.70</b>	<b>1.77</b>	<b>5.6%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	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	0.0%
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	--
Municipal Waste	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.0%
Wood and Other Biomass 4/	0.77	0.78	0.92	0.99	1.02	1.02	1.01	1.02	1.03	1.04	1.06	1.07	1.08	2.0%
Solar Photovoltaic 5/	1.18	1.26	1.35	1.44	1.56	1.68	1.82	1.97	2.06	2.16	2.27	2.40	2.54	8.8%
Wind	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	0.0%
<b>Total</b>	<b>2.76</b>	<b>2.85</b>	<b>3.08</b>	<b>3.24</b>	<b>3.39</b>	<b>3.52</b>	<b>3.64</b>	<b>3.80</b>	<b>3.90</b>	<b>4.02</b>	<b>4.14</b>	<b>4.28</b>	<b>4.43</b>	<b>3.8%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
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	0.0%
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	--
Municipal Waste	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.0%
Wood and Other Biomass 4/	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	1.2%
Solar Photovoltaic 5/	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	8.8%
Wind	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%
<b>Total</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>1.3%</b>

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.

Table 91. Renewable Energy Generation by Fuel  
United States

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 1/													
Generating Capacity (gigawatts)													
Conventional Hydropower	76.72	76.72	76.72	76.73	76.73	76.73	77.02	77.02	77.15	77.15	77.15	77.15	77.15
Geothermal 2/	2.23	2.29	2.36	2.40	2.42	2.50	2.63	2.73	2.78	2.83	2.88	2.90	2.98
Municipal Waste 3/	3.21	3.39	3.43	3.44	3.44	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99
Wood and Other Biomass 4/	1.96	2.01	2.18	2.20	2.20	2.20	2.20	2.20	2.20	2.46	2.74	3.16	3.32
Solar Thermal	0.40	0.40	0.53	0.54	0.54	0.54	0.54	0.63	0.71	0.79	0.80	0.80	0.80
Solar Photovoltaic 5/	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.14	0.15	0.17
Wind	8.92	11.50	15.90	20.21	20.61	25.61	27.26	27.78	28.50	29.03	29.63	30.08	30.75
Offshore Wind	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
Total	93.46	96.34	101.16	105.57	106.01	111.63	113.72	114.43	115.43	116.37	117.32	118.21	119.15
Electricity Generation (billion kilowatthours)													
Conventional Hydropower	266.91	285.07	258.56	267.99	282.86	289.47	296.28	296.30	297.19	297.20	297.22	297.24	297.25
Geothermal 2/	14.69	14.84	16.19	16.82	17.03	17.52	18.61	19.60	20.00	20.39	20.79	20.93	21.58
Biogenic Municipal Waste 6/	12.70	13.46	14.50	14.53	14.54	18.85	18.85	18.85	18.85	18.85	18.85	18.85	18.85
Wood and Other Biomass 4/	10.57	10.97	12.31	12.84	13.11	22.98	21.92	26.89	31.87	37.32	42.96	52.17	56.06
Solar Thermal	0.54	0.49	0.92	1.13	1.14	1.15	1.16	1.42	1.69	1.96	1.97	1.99	2.00
Solar Photovoltaic 5/	0.02	0.01	0.08	0.11	0.14	0.16	0.19	0.22	0.25	0.29	0.32	0.36	0.40
Wind	17.81	25.78	38.12	49.91	56.84	74.13	79.38	81.08	83.44	85.20	87.19	88.65	90.89
Offshore Wind	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
Total	323.23	350.62	340.66	363.32	385.66	424.27	436.38	444.36	453.29	461.20	469.30	480.18	487.03
Energy Consumption 7/ (quadrillion Btu)													
Conventional Hydropower	2.67	2.86	2.59	2.69	2.83	2.90	2.97	2.97	2.98	2.98	2.98	2.98	2.98
Geothermal 2/	0.31	0.31	0.34	0.35	0.36	0.37	0.41	0.44	0.45	0.47	0.48	0.48	0.50
Biogenic Municipal Waste 6/	0.17	0.18	0.20	0.20	0.20	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Wood and Other Biomass 4/	0.08	0.09	0.18	0.18	0.19	0.28	0.28	0.33	0.38	0.43	0.48	0.58	0.62
Solar Thermal	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
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
Wind	0.18	0.26	0.38	0.50	0.57	0.74	0.80	0.81	0.84	0.85	0.87	0.89	0.91
Offshore Wind	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
Total	3.43	3.71	3.70	3.93	4.16	4.57	4.72	4.82	4.92	5.01	5.10	5.21	5.29

Table 91. Renewable Energy Generation by Fuel  
United States

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
End-Use Generators 8/													
Generating Capacity (gigawatts)													
Conventional Hydropower 9/	0.71	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
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
Municipal Waste	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Wood and Other Biomass 4/	4.72	4.64	4.66	4.68	4.68	4.89	5.03	5.09	5.70	6.19	6.37	6.50	6.64
Solar Photovoltaic 5/	0.18	0.27	0.45	0.57	0.60	0.67	0.68	0.69	0.71	0.72	0.77	0.83	0.89
Wind	0.01	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.06
Total	5.96	6.00	6.20	6.34	6.38	6.65	6.80	6.88	7.50	8.00	8.24	8.43	8.64
Electricity Generation (billion kilowatthours)													
Conventional Hydropower 9/	3.46	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24
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
Municipal Waste	2.71	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
Wood and Other Biomass 4/	28.33	28.44	28.56	28.63	28.69	29.98	30.79	31.17	35.69	39.22	40.51	41.39	42.38
Solar Photovoltaic 5/	0.28	0.43	0.72	0.92	0.96	1.07	1.09	1.11	1.13	1.16	1.25	1.34	1.44
Wind	0.02	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.08
Total	34.79	34.98	35.40	35.67	35.77	37.17	38.01	38.40	42.95	46.50	47.88	48.87	49.97
Energy Consumption (quadrillion Btu)													
Conventional Hydropower 9/	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
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
Municipal Waste	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
Wood and Other Biomass 4/	0.37	0.37	0.37	0.37	0.37	0.38	0.39	0.40	0.49	0.54	0.57	0.60	0.63
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
Wind	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
Total	0.46	0.46	0.47	0.47	0.47	0.48	0.49	0.50	0.59	0.64	0.67	0.70	0.73

Table 91. Renewable Energy Generation by Fuel  
United States

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>Electric Power Sector 1/</b>														
<b>Generating Capacity</b> (gigawatts)														
Conventional Hydropower	77.26	77.26	77.26	77.26	77.26	77.26	77.26	77.26	77.26	77.26	77.26	77.32	77.32	0.0%
Geothermal 2/	3.03	3.14	3.28	3.33	3.43	3.56	3.66	3.77	3.86	3.95	4.03	4.08	4.18	2.5%
Municipal Waste 3/	3.99	3.99	4.02	4.02	4.03	4.03	4.06	4.06	4.06	4.06	4.06	4.06	4.06	0.8%
Wood and Other Biomass 4/	3.61	4.18	4.39	4.46	4.54	4.59	4.70	4.84	4.99	5.08	5.12	5.20	5.58	4.3%
Solar Thermal	0.81	0.81	0.82	0.82	0.83	0.83	0.83	0.84	0.84	0.85	0.85	0.86	0.86	3.2%
Solar Photovoltaic 5/	0.18	0.20	0.22	0.23	0.25	0.27	0.29	0.30	0.32	0.34	0.36	0.37	0.39	11.2%
Wind	31.13	31.73	33.64	34.03	34.33	35.27	36.18	37.18	37.56	37.82	39.41	39.66	40.15	5.3%
Offshore Wind	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	--
Total	120.01	121.31	123.62	124.15	124.67	125.81	126.98	128.26	128.91	129.37	131.09	131.55	132.54	1.3%
<b>Electricity Generation</b> (billion kilowatthours)														
Conventional Hydropower	297.96	297.98	298.00	298.01	298.03	298.05	298.07	298.09	298.11	298.13	298.16	298.51	298.53	0.2%
Geothermal 2/	22.00	22.82	23.96	24.34	25.14	26.17	26.99	27.84	28.57	29.29	29.87	30.27	31.05	3.1%
Biogenic Municipal Waste 6/	18.85	18.85	19.08	19.08	19.20	19.20	19.43	19.46	19.46	19.47	19.47	19.47	19.47	1.6%
Wood and Other Biomass 4/	65.38	71.80	77.53	78.16	78.57	80.52	81.43	83.30	83.41	83.78	84.96	84.88	82.55	8.8%
Solar Thermal	2.01	2.02	2.04	2.05	2.07	2.08	2.10	2.11	2.13	2.14	2.15	2.17	2.18	6.4%
Solar Photovoltaic 5/	0.43	0.48	0.52	0.56	0.61	0.65	0.70	0.74	0.78	0.83	0.87	0.92	0.96	19.6%
Wind	92.16	94.15	101.23	102.52	103.58	106.71	109.70	113.14	114.46	115.33	120.72	121.53	123.18	6.7%
Offshore Wind	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	--
Total	498.80	508.11	522.35	524.72	527.20	533.38	538.41	544.68	546.93	548.97	556.20	557.74	557.91	2.0%
<b>Energy Consumption 7/</b> (quadrillion Btu)														
Conventional Hydropower	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	2.99	0.2%
Geothermal 2/	0.51	0.54	0.58	0.59	0.61	0.65	0.67	0.70	0.72	0.75	0.77	0.78	0.80	4.0%
Biogenic Municipal Waste 6/	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	1.6%
Wood and Other Biomass 4/	0.71	0.77	0.82	0.82	0.83	0.85	0.86	0.87	0.87	0.87	0.89	0.88	0.86	9.9%
Solar Thermal	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	6.4%
Solar Photovoltaic 5/	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	19.6%
Wind	0.92	0.94	1.01	1.03	1.04	1.07	1.10	1.13	1.15	1.16	1.21	1.22	1.23	6.7%
Offshore Wind	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	--
Total	5.42	5.53	5.69	5.72	5.76	5.84	5.91	5.99	6.03	6.06	6.14	6.17	6.18	2.2%

Table 91. Renewable Energy Generation by Fuel  
United States

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
<b>End-Use Generators 8/</b>														
<b>Generating Capacity</b>														
<b>(gigawatts)</b>														
Conventional Hydropower 9/	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	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	--
Municipal Waste	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.0%
Wood and Other Biomass 4/	7.02	7.75	8.57	8.56	9.64	10.55	11.59	12.21	12.28	12.39	12.52	12.62	12.60	4.3%
Solar Photovoltaic 5/	0.96	1.04	1.13	1.23	1.34	1.47	1.61	1.77	1.94	2.12	2.33	2.55	2.80	10.2%
Wind	0.07	0.08	0.09	0.11	0.12	0.14	0.15	0.17	0.19	0.20	0.22	0.24	0.26	8.0%
<b>Total</b>	<b>9.10</b>	<b>9.92</b>	<b>10.85</b>	<b>10.94</b>	<b>12.15</b>	<b>13.20</b>	<b>14.41</b>	<b>15.20</b>	<b>15.45</b>	<b>15.76</b>	<b>16.12</b>	<b>16.46</b>	<b>16.72</b>	<b>4.4%</b>
<b>Electricity Generation</b>														
<b>(billion kilowatthours)</b>														
Conventional Hydropower 9/	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	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	--
Municipal Waste	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	0.0%
Wood and Other Biomass 4/	45.14	50.62	57.01	57.45	66.16	72.66	80.29	84.75	85.09	85.76	86.61	87.22	86.99	4.8%
Solar Photovoltaic 5/	1.56	1.69	1.85	2.01	2.21	2.43	2.69	2.97	3.26	3.58	3.93	4.33	4.76	10.6%
Wind	0.10	0.11	0.13	0.15	0.18	0.20	0.22	0.24	0.27	0.30	0.32	0.35	0.38	8.3%
<b>Total</b>	<b>52.86</b>	<b>58.49</b>	<b>65.05</b>	<b>65.68</b>	<b>74.61</b>	<b>81.35</b>	<b>89.26</b>	<b>94.02</b>	<b>94.68</b>	<b>95.70</b>	<b>96.92</b>	<b>97.96</b>	<b>98.19</b>	<b>4.4%</b>
<b>Energy Consumption</b>														
<b>(quadrillion Btu)</b>														
Conventional Hydropower 9/	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%
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	--
Municipal Waste	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	0.0%
Wood and Other Biomass 4/	0.67	0.71	0.75	0.80	0.86	0.93	1.00	1.08	1.12	1.13	1.13	1.14	1.14	4.9%
Solar Photovoltaic 5/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	10.6%
Wind	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	8.3%
<b>Total</b>	<b>0.77</b>	<b>0.81</b>	<b>0.85</b>	<b>0.91</b>	<b>0.96</b>	<b>1.03</b>	<b>1.10</b>	<b>1.18</b>	<b>1.23</b>	<b>1.23</b>	<b>1.24</b>	<b>1.25</b>	<b>1.26</b>	<b>4.2%</b>

Table 91. Renewable Energy Generation by Fuel  
United States

1/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes all municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Includes projections for energy crops after 2010.

5/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2005, EIA estimates that as much as 192 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2005, plus an additional 481 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007), Table 10.8 (annual PV shipments, 1989-2005). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

6/ Includes biogenic municipal solid waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy, (Washington, DC, May 2007).

7/ Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,022 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.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 are model results and may differ slightly from official EIA data reports.

Sources: 2005 and 2006 generation: EIA, Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.