

Appendix B

**CECA Competitive Case:
Detailed National and Regional Results,
2000, 2005, 2010, and 2015**

Table B1. National Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)

Sales, Generation, Consumption, Capability, Emissions, Prices, and Expenditures	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Sales								
Residential	1,174	1,171	1,263	1,254	1,352	1,341	1,466	1,452
Commercial	1,103	1,096	1,160	1,159	1,219	1,217	1,299	1,297
Industrial	1,037	1,027	1,063	1,071	1,092	1,112	1,135	1,151
Transportation	17	18	29	31	43	44	53	55
Total	3,330	3,312	3,515	3,514	3,706	3,714	3,954	3,956
Generation								
Electric Generator ¹								
Coal	1,932	2,037	1,945	2,047	2,012	2,080	2,153	2,213
Natural Gas	330	349	540	505	671	654	913	904
Petroleum	85	77	25	30	11	18	13	17
Hydro	310	324	312	325	319	325	322	325
Nuclear	694	673	661	652	581	574	400	413
Geothermal	16	14	18	17	20	20	21	23
Municipal Solid Waste	23	24	24	25	26	27	27	28
Biomass ²	57	24	104	73	106	78	93	55
Solar Thermal	1	1	1	1	1	1	1	1
Wind	6	6	20	37	66	92	117	129
Solar Photovoltaic	0	0	0	0	1	1	1	1
Total	3,453	3,529	3,651	3,712	3,816	3,871	4,061	4,111
Renewable Cogenerators ³	41	48	45	52	51	59	54	64
Electricity Imports (Firm)	54	24	28	20	51	20	54	19
Electric Generator Consumption by Fuel (Quadrillion Btu)								
Coal	19.76	21.21	19.60	20.95	19.86	20.73	21.25	21.99
Natural Gas	3.27	3.46	4.52	4.47	5.10	5.34	6.64	6.89
Petroleum	0.90	0.81	0.25	0.31	0.12	0.19	0.14	0.18
Total	23.93	25.47	24.37	25.73	25.08	26.26	28.03	29.06
Capability (Gigawatts)⁴								
Combined Cycle	33.97	35.28	72.93	60.23	117.67	85.24	162.13	119.38
Coal	310.27	310.32	300.83	302.62	302.17	299.21	305.62	302.75
Combustion Turbines	68.69	89.78	113.68	123.42	136.48	160.56	169.07	190.52
Fuel Cells	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00
Hydro	79.01	79.08	79.34	79.39	79.40	79.44	79.40	79.44
Nuclear	94.84	94.86	85.49	87.38	73.18	74.21	50.11	53.43
Other Fossil Fuel	138.83	138.88	99.30	116.50	71.79	104.40	68.54	91.59
Pumped Storage	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52
Geothermal	3.07	3.06	3.15	3.23	3.42	3.43	3.50	3.64
Municipal Solid Waste	3.68	3.79	3.88	4.00	4.13	4.24	4.27	4.41
Biomass ²	2.09	2.09	2.29	2.30	2.68	2.37	2.70	2.37
Solar Thermal	0.37	0.37	0.42	0.42	0.44	0.44	0.48	0.48
Wind	2.80	2.80	7.80	11.91	26.92	28.51	46.38	39.57
Solar Photovoltaic	0.04	0.04	0.14	0.14	0.30	0.30	0.46	0.46
Total	759.18	781.88	790.77	813.07	840.11	863.88	914.20	909.58
Emissions								
Carbon (Million Metric Tons)	575	600	575	597	587	602	646	662
SO ₂ (Thousand Short Tons)	10,320	11,380	9,746	10,450	9,024	9,140	9,053	8,950
Average Electricity Price (1997 Mills per Kilowatthour)								
56.5	59.9	57.8	58.2	54.7	55.1	52.2	52.5	
Electricity Expenditures (Billion 1997 Dollars)								
188.15	198.41	203.17	204.52	202.72	204.66	206.40	207.66	

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Only includes renewable generation from traditional cogenerators.

⁴Includes nontraditional cogenerators.

Btu = British thermal unit. SO₂ = sulfur dioxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECABAS1.D082799A.

**Table B2. East Central Area Reliability Coordination Agreement (ECAR) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	525	517	546	542	569	566	601	596
Generation¹								
Coal	490	501	491	493	482	508	508	537
Natural Gas	14	13	26	16	62	34	77	73
Petroleum	2	0	0	0	0	0	0	0
Hydro	3	3	3	3	3	3	3	3
Nuclear	53	51	48	53	24	30	17	17
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	1	1	1	1	1	1	1	1
Biomass ²	13	6	25	25	24	24	26	16
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	0	1	2	3
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	575	575	593	591	597	602	635	650
Capability (Gigawatts)³								
Combined Cycle	2.17	2.17	3.88	2.52	8.67	3.37	11.60	6.22
Coal	84.51	84.67	76.78	78.68	75.97	75.44	75.97	75.44
Combustion Turbines	7.40	10.25	19.29	15.09	25.64	24.54	30.90	28.98
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	1.47	1.50	1.47	1.50	1.47	1.50	1.47	1.50
Nuclear	7.59	7.59	6.59	7.59	3.09	4.09	1.99	1.99
Other Fossil Fuel	3.66	3.66	3.52	3.66	3.52	3.66	3.52	3.66
Pumped Storage	3.58	4.75	3.58	4.75	3.58	4.75	3.58	4.75
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.11	0.11	0.12	0.12	0.14	0.14	0.15	0.16
Biomass ²	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.00	0.00	0.02	0.00	0.18	0.34	0.83	0.80
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	110.74	114.95	115.50	114.17	122.50	118.08	130.26	123.74
Emissions								
NO _x (Thousand Short Tons)	1,098	1,126	816	846	790	865	836	911
Average Electricity Price (1997 Mills per Kilowatthour)	47.6	49.2	49.7	49.8	47.2	48.8	43.5	46.3

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B3. Electric Reliability Council of Texas (ERCOT) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	237	244	252	260	266	278	287	297
Generation¹								
Coal	118	118	117	118	118	117	118	119
Natural Gas	88	97	99	109	104	109	121	123
Petroleum	2	2	1	1	1	1	1	1
Hydro	1	1	1	1	1	1	1	1
Nuclear	36	35	37	37	37	37	37	37
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	0	0	1	1	1	1	1	1
Biomass ²	3	1	6	3	6	4	6	2
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	1	0	5	6	7	10
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	248	254	263	270	273	276	293	294
Capability (Gigawatts)³								
Combined Cycle	3.28	3.36	11.08	7.88	17.39	10.28	20.93	13.24
Coal	15.77	15.58	15.93	15.58	15.93	15.58	15.93	15.58
Combustion Turbines	3.59	5.88	6.17	8.45	7.96	13.46	10.67	18.20
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	0.52	0.51	0.52	0.51	0.52	0.51	0.52	0.51
Nuclear	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
Other Fossil Fuel	29.77	29.82	22.88	23.19	17.56	18.84	17.20	13.89
Pumped Storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.06	0.06	0.08	0.08	0.11	0.11	0.13	0.13
Biomass ²	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
Wind	0.19	0.19	0.55	0.19	2.23	2.15	2.87	3.39
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.03
Total	57.97	60.20	62.02	60.69	66.52	65.75	73.07	69.78
Emissions								
NO _x (Thousand Short Tons)	319	334	261	314	235	281	234	276
Average Electricity Price (1997 Mills per Kilowatthour)	54.7	57.1	53.1	54.7	51.6	50.8	46.0	45.8

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

Table B4. Mid-Atlantic Area Council (MAAC) Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	254	251	264	264	275	276	290	291
Generation¹								
Coal	130	125	123	125	124	126	132	130
Natural Gas	16	14	50	40	63	59	106	94
Petroleum	5	3	2	2	3	1	4	1
Hydro	4	5	4	5	4	5	4	5
Nuclear	91	89	93	89	84	80	31	46
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	5	5	5	5	5	5	5	5
Biomass ²	3	2	6	4	6	4	6	4
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	3	8	9	10
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	253	244	282	270	291	289	296	295
Capability (Gigawatts)³								
Combined Cycle	3.70	3.90	8.09	6.92	10.85	9.66	16.63	13.61
Coal	20.30	19.40	19.95	19.31	19.79	19.17	19.79	19.17
Combustion Turbines	9.39	9.46	13.05	12.91	14.31	13.07	16.45	14.63
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	1.23	1.20	1.23	1.20	1.23	1.20	1.23	1.20
Nuclear	12.19	12.21	12.19	12.21	9.97	10.00	4.04	6.25
Other Fossil Fuel	8.96	8.96	5.26	6.25	5.26	6.25	5.26	6.07
Pumped Storage	1.67	1.34	1.67	1.34	1.67	1.34	1.67	1.34
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.77	0.81	0.77	0.81	0.77	0.81	0.77	0.81
Biomass ²	0.07	0.06	0.07	0.06	0.07	0.06	0.07	0.06
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.00	0.00	0.02	0.00	1.20	2.71	3.57	3.43
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	58.26	57.34	62.27	61.02	65.10	64.27	69.45	66.59
Emissions								
NO _x (Thousand Short Tons)	293	279	197	220	193	222	211	245
Average Electricity Price (1997 Mills per Kilowatthour)	66.8	67.6	69.0	63.8	63.5	58.8	61.8	58.4

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B5. Mid-America Interconnected Network (MAIN) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	228	240	237	251	247	260	261	273
Generation¹								
Coal	148	159	153	161	161	167	178	183
Natural Gas	2	3	3	5	4	8	7	18
Petroleum	1	1	0	0	0	0	0	1
Hydro	3	3	3	3	3	3	3	3
Nuclear	88	85	85	84	82	81	75	74
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	0	0	0	0	0	0	0	0
Biomass ²	5	1	8	9	9	8	9	3
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	0	0	0	0
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	248	251	254	262	259	268	274	282
Capability (Gigawatts)³								
Combined Cycle	0.29	0.29	0.60	1.23	1.61	2.20	2.78	3.72
Coal	27.81	27.66	27.02	25.42	26.88	25.42	26.88	25.45
Combustion Turbines	4.87	11.53	15.22	18.10	18.27	19.58	20.87	21.35
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Nuclear	13.11	12.72	11.57	11.57	10.80	10.80	9.51	9.51
Other Fossil Fuel	4.76	4.76	1.93	4.66	1.40	4.66	1.40	4.66
Pumped Storage	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
Biomass ²	0.04	0.03	0.06	0.06	0.06	0.06	0.06	0.06
Solar Thermal	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
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	52.22	58.34	57.76	62.40	60.37	64.07	62.85	66.11
Emissions								
NO _x (Thousand Short Tons)	319	347	236	279	241	279	277	305
Average Electricity Price (1997 Mills per Kilowatthour)	53.2	56.3	56.2	53.6	53.1	50.4	49.0	47.2

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

Table B6. Mid-Continent Area Power Pool (MAPP) Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	145	149	152	157	160	164	169	172
Generation¹								
Coal	117	137	132	149	139	150	152	154
Natural Gas	2	2	2	3	4	4	9	6
Petroleum	1	0	0	0	0	0	0	0
Hydro	12	17	12	17	12	17	12	17
Nuclear	24	25	12	12	11	11	0	0
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	1	2	1	2	2	2	2	2
Biomass ²	3	1	8	1	8	2	4	1
Solar Thermal	0	0	0	0	0	0	0	0
Wind	1	1	2	2	2	4	12	13
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	161	186	169	185	178	189	190	193
Capability (Gigawatts)³								
Combined Cycle	0.42	0.42	0.57	0.46	1.86	0.53	2.65	0.55
Coal	21.68	20.78	20.94	20.71	20.92	20.18	20.92	20.18
Combustion Turbines	4.97	6.35	5.72	9.67	7.41	12.30	9.39	13.50
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41
Nuclear	3.35	3.74	1.57	1.57	1.03	1.03	0.00	0.00
Other Fossil Fuel	0.61	0.61	0.56	0.60	0.56	0.60	0.56	0.60
Pumped Storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.20	0.20	0.23	0.23	0.27	0.27	0.29	0.29
Biomass ²	0.11	0.11	0.23	0.23	0.23	0.23	0.23	0.23
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.52	0.52	0.68	0.68	0.69	1.27	4.28	3.93
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	35.27	36.13	33.90	37.56	36.37	39.81	41.70	42.68
Emissions								
NO _x (Thousand Short Tons)	247	309	288	326	294	318	315	326
Average Electricity Price (1997 Mills per Kilowatthour)	44.7	51.0	47.2	51.6	46.2	47.5	45.3	47.6

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B7. Northeast Power Coordinating Council/New England (NE) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	117	116	121	120	125	124	133	131
Generation¹								
Coal	22	21	22	20	20	20	16	19
Natural Gas	22	21	43	47	60	67	79	83
Petroleum	24	17	7	5	1	2	1	1
Hydro	7	9	7	9	7	9	7	9
Nuclear	30	29	27	26	22	21	13	18
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	4	5	4	5	5	5	5	6
Biomass ²	3	3	5	3	5	4	4	4
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	1	0	1	1	5	1
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	114	105	115	117	121	130	131	140
Capability (Gigawatts)³								
Combined Cycle	2.13	2.18	4.93	5.79	7.89	7.31	10.84	9.66
Coal	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Combustion Turbines	1.78	1.78	1.78	1.98	1.83	4.02	2.91	5.72
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Nuclear	4.32	4.32	2.78	3.65	2.78	2.78	1.16	2.28
Other Fossil Fuel	8.14	8.14	5.45	5.70	1.84	2.96	0.87	0.81
Pumped Storage	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.63	0.63	0.65	0.65	0.67	0.67	0.67	0.69
Biomass ²	0.76	0.75	0.81	0.81	0.67	0.88	0.67	0.88
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.02	0.02	0.19	0.12	0.45	0.34	1.83	0.40
Solar Photovoltaic	0.00	0.00	0.01	0.01	0.05	0.04	0.05	0.04
Total	24.49	24.53	23.33	25.43	22.90	25.73	25.72	27.21
Emissions								
NO _x (Thousand Short Tons)	78	73	48	60	34	67	25	70
Average Electricity Price (1997 Mills per Kilowatthour)	82.6	86.1	82.0	80.8	78.5	76.5	68.1	67.7

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B8. Northeast Power Coordinating Council/New York (NY) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	143	150	149	156	155	161	163	168
Generation¹								
Coal	27	35	28	36	27	36	27	36
Natural Gas	34	41	43	57	72	65	82	82
Petroleum	13	17	2	6	1	2	1	1
Hydro	29	20	31	21	32	21	32	21
Nuclear	35	34	22	21	9	9	9	9
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	2	2	2	2	2	2	2	2
Biomass ²	1	1	1	2	1	2	1	2
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	0	1	2	1
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	141	150	130	145	144	138	156	154
Capability (Gigawatts)³								
Combined Cycle	4.62	4.62	5.75	6.28	10.03	7.94	11.69	10.97
Coal	3.98	4.92	3.76	4.92	3.73	4.92	3.73	4.92
Combustion Turbines	4.10	4.10	4.09	4.09	4.09	6.48	4.09	8.53
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	4.63	4.63	4.91	4.91	4.96	4.96	4.96	4.96
Nuclear	4.91	4.91	2.18	2.18	1.10	1.09	1.10	1.09
Other Fossil Fuel	12.39	12.39	8.73	8.17	3.15	5.24	3.15	1.80
Pumped Storage	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Biomass ²	0.04	0.04	0.04	0.04	0.07	0.04	0.07	0.04
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.00	0.00	0.02	0.01	0.18	0.18	0.57	0.31
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	36.28	37.23	31.09	32.21	28.91	32.47	30.95	34.25
Emissions								
NO _x (Thousand Short Tons)	67	102	43	85	36	82	38	84
Average Electricity Price (1997 Mills per Kilowatthour)	92.4	84.0	88.2	83.1	81.2	83.0	72.4	75.1

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B9. Southeastern Electric Reliability Council/Florida (FL) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	180	177	193	192	208	207	225	225
Generation¹								
Coal	73	76	85	76	97	77	107	101
Natural Gas	36	29	65	52	83	75	103	87
Petroleum	22	21	5	13	2	10	2	10
Hydro	0	0	0	0	0	0	0	0
Nuclear	29	28	29	27	23	21	13	11
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	4	4	4	4	4	4	4	4
Biomass ²	2	1	3	1	4	2	2	2
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	0	0	0	0
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	167	159	193	174	213	189	233	214
Capability (Gigawatts)³								
Combined Cycle	5.15	5.12	10.23	6.82	16.13	9.53	21.13	11.97
Coal	9.94	10.09	12.27	10.09	13.21	10.09	14.22	13.08
Combustion Turbines	5.59	5.54	9.82	6.55	10.86	7.38	11.26	8.71
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Nuclear	3.82	3.82	3.82	3.82	3.01	3.01	1.68	1.68
Other Fossil Fuel	13.32	13.32	8.75	13.09	5.29	13.09	5.29	12.10
Pumped Storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Biomass ²	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Solar Thermal	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
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	38.65	38.73	45.73	41.21	49.33	43.94	54.41	48.38
Emissions								
NO _x (Thousand Short Tons)	219	226	174	226	166	229	169	230
Average Electricity Price (1997 Mills per Kilowatthour)	63.7	61.8	65.7	62.4	62.3	62.9	60.3	58.4

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B10. Southeastern Electric Reliability Council (SERC) Regional Electricity Results:
CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	588	568	621	607	653	644	697	689
Generation¹								
Coal	391	422	378	435	416	437	449	478
Natural Gas	10	7	46	25	44	64	110	120
Petroleum	2	2	1	1	2	1	2	1
Hydro	38	38	38	38	38	38	38	38
Nuclear	192	186	189	185	171	167	103	101
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	1	2	2	2	2	3	2	3
Biomass ²	11	5	17	10	15	16	17	15
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	1	1	2	2	2
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	645	661	670	697	688	726	722	757
Capability (Gigawatts)³								
Combined Cycle	3.01	3.00	9.33	5.98	12.78	13.00	26.32	21.30
Coal	65.78	65.63	62.64	65.63	62.53	65.52	62.04	65.03
Combustion Turbines	13.15	13.14	21.07	21.01	25.22	28.56	33.83	35.43
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	11.87	11.87	11.93	11.93	11.93	11.93	11.93	11.93
Nuclear	25.47	25.58	24.71	24.83	21.34	21.46	13.44	13.56
Other Fossil Fuel	3.15	3.15	3.07	3.09	2.98	2.98	2.89	2.89
Pumped Storage	7.52	6.68	7.52	6.68	7.52	6.68	7.52	6.68
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.29	0.37	0.34	0.41	0.39	0.46	0.42	0.49
Biomass ²	0.17	0.17	0.16	0.17	0.16	0.17	0.16	0.17
Solar Thermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.00	0.00	0.09	0.25	0.31	0.48	0.62	0.53
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	130.40	129.59	140.85	139.99	145.15	151.23	159.16	158.01
Emissions								
NO _x (Thousand Short Tons)	808	889	585	791	645	802	705	847
Average Electricity Price (1997 Mills per Kilowatthour)	50.4	57.4	51.8	55.1	51.1	50.8	50.7	49.1

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

Table B11. Southwest Power Pool (SPP) Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	289	285	305	303	321	322	342	342
Generation¹								
Coal	197	209	198	205	196	206	202	212
Natural Gas	33	24	47	45	51	46	59	54
Petroleum	1	2	0	0	0	0	0	0
Hydro	8	7	8	7	8	7	8	7
Nuclear	47	45	47	46	47	46	38	37
Geothermal	0	0	0	0	0	0	0	0
Municipal Solid Waste	0	0	0	1	0	1	0	1
Biomass ²	6	1	11	7	11	6	6	2
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	0	6	14	24	29
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	295	290	311	310	321	327	341	342
Capability (Gigawatts)³								
Combined Cycle	2.07	2.07	4.47	4.01	7.91	6.97	9.81	7.44
Coal	27.80	27.98	28.27	28.60	28.21	28.59	28.21	28.52
Combustion Turbines	5.15	5.15	7.82	6.99	10.17	8.86	15.05	10.53
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	2.81	2.84	2.81	2.84	2.81	2.84	2.81	2.84
Nuclear	6.05	5.93	6.05	5.93	6.05	5.93	4.27	4.16
Other Fossil Fuel	30.27	30.27	21.59	26.79	18.96	24.94	17.13	23.94
Pumped Storage	0.51	0.50	0.51	0.50	0.51	0.50	0.51	0.50
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste	0.07	0.07	0.10	0.10	0.13	0.13	0.15	0.15
Biomass ²	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
Wind	0.00	0.00	0.01	0.00	2.41	4.77	9.74	9.54
Solar Photovoltaic	0.00	0.00	0.01	0.01	0.02	0.02	0.05	0.05
Total	74.71	74.82	71.62	75.77	77.17	83.56	87.71	87.67
Emissions								
NO _x (Thousand Short Tons)	446	465	413	439	382	411	384	416
Average Electricity Price (1997 Mills per Kilowatthour)	51.8	53.5	52.6	51.8	50.6	47.6	49.1	48.0

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B12. Southwest Systems Coordinating Council/Rocky Mountain Power Area and Arizona (RA)
Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	136	115	151	129	167	142	182	156
Generation¹								
Coal	103	103	105	101	105	102	107	103
Natural Gas	7	25	11	32	9	31	21	29
Petroleum	0	0	0	0	0	0	0	0
Hydro	12	13	12	13	12	13	12	13
Nuclear	28	21	30	23	30	23	30	23
Geothermal	3	3	3	3	3	3	3	3
Municipal Solid Waste	0	0	0	0	0	1	0	1
Biomass ²	2	0	6	2	6	1	3	1
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	5	6	19	13	20	16
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	157	165	171	181	183	188	196	189
Capability (Gigawatts)³								
Combined Cycle	1.36	2.00	1.85	4.26	3.11	4.44	5.06	4.69
Coal	14.15	13.25	14.15	13.27	14.16	13.34	14.18	13.41
Combustion Turbines	2.58	4.31	3.70	4.61	4.44	6.87	6.23	7.05
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	3.98	3.98	3.98	3.98	3.98	3.98	3.98	3.98
Nuclear	3.81	2.99	3.81	2.99	3.81	2.99	3.81	2.99
Other Fossil Fuel	2.59	2.59	2.58	2.59	2.58	2.52	2.58	2.52
Pumped Storage	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Geothermal	0.35	0.31	0.35	0.32	0.36	0.34	0.40	0.38
Municipal Solid Waste	0.04	0.04	0.06	0.06	0.08	0.08	0.09	0.09
Biomass ²	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Thermal	0.02	0.02	0.06	0.06	0.06	0.06	0.07	0.07
Wind	0.08	0.06	1.95	1.86	6.42	3.62	7.06	4.27
Solar Photovoltaic	0.01	0.01	0.04	0.04	0.06	0.06	0.09	0.08
Total	29.69	30.28	33.24	34.77	39.78	39.02	44.26	40.26
Emissions								
NO _x (Thousand Short Tons)	226	236	230	227	219	218	219	215
Average Electricity Price (1997 Mills per Kilowatthour)	52.2	75.9	58.7	70.5	52.8	63.1	53.1	59.3

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B13. Western Systems Coordinating Council/Northwest Power Pool (NWP)
Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	237	232	254	251	273	270	294	291
Generation¹								
Coal	84	87	81	86	81	87	84	89
Natural Gas	11	16	12	25	11	32	23	51
Petroleum	0	0	0	0	0	0	0	0
Hydro	153	164	152	163	159	163	162	163
Nuclear	7	7	8	8	9	8	0	0
Geothermal	1	1	2	4	3	7	5	10
Municipal Solid Waste	1	1	1	1	1	1	1	1
Biomass ²	3	1	5	2	5	2	3	2
Solar Thermal	0	0	0	0	0	0	0	0
Wind	0	0	0	20	17	27	21	28
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	259	276	261	310	287	328	298	345
Capability (Gigawatts)³								
Combined Cycle	1.88	2.26	1.88	3.69	1.94	4.41	3.56	6.99
Coal	11.37	11.58	11.37	11.60	11.37	11.67	11.37	11.88
Combustion Turbines	1.29	7.47	1.29	8.44	1.30	8.45	1.45	8.45
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	35.03	35.05	35.03	35.03	35.03	35.03	35.03	35.03
Nuclear	1.11	1.11	1.11	1.11	1.11	1.11	0.00	0.00
Other Fossil Fuel	0.72	0.72	0.47	0.72	0.42	0.72	0.42	0.72
Pumped Storage	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Geothermal	0.21	0.21	0.35	0.52	0.61	0.89	0.82	1.28
Municipal Solid Waste	0.11	0.11	0.13	0.13	0.17	0.17	0.19	0.19
Biomass ²	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Solar Thermal	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02
Wind	0.03	0.03	0.03	5.83	7.98	7.68	10.17	7.98
Solar Photovoltaic	0.00	0.00	0.01	0.03	0.05	0.09	0.10	0.14
Total	52.20	59.00	52.14	67.57	60.45	70.70	63.59	73.15
Emissions								
NO _x (Thousand Short Tons)	172	176	167	174	160	171	161	178
Average Electricity Price (1997 Mills per Kilowatthour)	39.2	49.1	40.5	48.1	38.4	45.0	38.9	43.2

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.

**Table B14. Western Systems Coordinating Council/California-Southern Nevada Power (CNV)
Regional Electricity Results: CECA Competitive Cases
(Billion Kilowatthours, Unless Otherwise Noted)**

Demand, Generation, Capability, Emissions, and Prices	Projections							
	2000		2005		2010		2015	
	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS	DOE/ POEMS	EIA/ NEMS
Electricity Demand	252	246	268	263	288	280	309	300
Generation¹								
Coal	32	44	35	43	48	47	72	54
Natural Gas	54	57	93	48	103	60	115	87
Petroleum	10	10	6	1	1	0	1	0
Hydro	40	45	40	45	40	45	40	45
Nuclear	34	39	34	40	34	40	34	40
Geothermal	12	10	13	10	14	10	13	9
Municipal Solid Waste	2	2	2	2	2	2	2	2
Biomass ²	2	2	4	3	8	4	6	2
Solar Thermal	1	1	1	1	1	1	1	1
Wind	4	4	10	7	12	15	12	15
Solar Photovoltaic	0	0	0	0	0	0	0	0
Total	191	214	237	201	262	223	296	256
Capability (Gigawatts)³								
Combined Cycle	3.91	3.91	10.27	4.40	17.51	5.60	19.13	9.00
Coal	4.16	5.73	4.69	5.76	6.43	6.24	9.35	7.04
Combustion Turbines	4.82	4.83	4.68	5.52	4.96	6.97	5.98	9.43
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hydro	11.33	11.33	11.33	11.33	11.33	11.33	11.33	11.33
Nuclear	4.31	5.13	4.31	5.13	4.31	5.13	4.31	5.13
Other Fossil Fuel	20.48	20.48	14.52	17.96	8.29	17.92	8.29	17.92
Pumped Storage	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
Geothermal	2.51	2.54	2.44	2.38	2.44	2.19	2.29	1.97
Municipal Solid Waste	0.36	0.36	0.37	0.36	0.37	0.36	0.37	0.36
Biomass ²	0.37	0.37	0.37	0.37	0.88	0.37	0.90	0.37
Solar Thermal	0.35	0.35	0.36	0.36	0.37	0.37	0.39	0.38
Wind	1.95	1.96	4.22	2.94	4.84	4.96	4.84	4.96
Solar Photovoltaic	0.02	0.02	0.07	0.04	0.11	0.07	0.16	0.12
Total	58.29	60.72	61.35	60.29	65.57	65.25	71.05	71.75
Emissions								
NO _x (Thousand Short Tons)	78	102	69	94	51	97	52	108
Average Electricity Price (1997 Mills per Kilowatthour)	77.0	74.9	77.8	73.3	69.7	71.2	68.0	69.5

¹Excludes traditional cogenerators and firm imports.

²Includes co-firing as well as direct combustion.

³Includes nontraditional cogenerators.

NO_x = Nitrogen oxide.

Sources: U.S. Department of Energy, *Supporting Analysis for the Comprehensive Electricity Competition Act*, DOE/PO-0059 (Washington, DC, May 1999), and Energy Information Administration, National Energy Modeling System run CECACMP2.D082899A.