

Appendix D

Building and Time of Use Inputs

Residential Building Stock Table

Units: Number of Dwellings				
Segment	Sngl Fam	Mult Fam	SF LI	MF LI
Existing	1,659,427	429,606	542,690	####
New Construction	8,297	2,148	2,713	791

End Use Definition	
End Use	End Use Definition
1	Space Cooling
2	Lighting
3	Refrigeration
4	Freezer
5	Water Heating
6	Clothes Washer
7	Clothes Dryer
8	Dishwashers
9	Space Heating
10	Cooking
11	Electronics
12	Pool Pump
13	Cooling and Heating
14	Miscellaneous
15	House

End Use Load Shape Table

Fraction of Annual Use in Cost Period

Building Type	End Use 1						End Use 2						End Use 3						End Use 4					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.470	0.501	0.013	0.016			0.121	0.183	0.318	0.378			0.127	0.237	0.236	0.400			0.130	0.234	0.223	0.413		
MF	0.470	0.501	0.013	0.016			0.121	0.183	0.318	0.378			0.127	0.237	0.236	0.400			0.130	0.234	0.223	0.413		
SF LI	0.470	0.501	0.013	0.016			0.121	0.183	0.318	0.378			0.127	0.237	0.236	0.400			0.130	0.234	0.223	0.413		
MF LI	0.470	0.501	0.013	0.016			0.121	0.183	0.318	0.378			0.127	0.237	0.236	0.400			0.130	0.234	0.223	0.413		

Building Type	End Use 5						End Use 6						End Use 7						End Use 8					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.100	0.171	0.318	0.411			0.150	0.182	0.378	0.289			0.145	0.150	0.402	0.303			0.150	0.150	0.407	0.292		
MF	0.100	0.171	0.318	0.411			0.150	0.182	0.378	0.289			0.145	0.150	0.402	0.303			0.150	0.150	0.407	0.292		
SF LI	0.100	0.171	0.318	0.411			0.150	0.182	0.378	0.289			0.145	0.150	0.402	0.303			0.150	0.150	0.407	0.292		
MF LI	0.100	0.171	0.318	0.411			0.150	0.182	0.378	0.289			0.145	0.150	0.402	0.303			0.150	0.150	0.407	0.292		

Building Type	End Use 9						End Use 10						End Use 11						End Use 12					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.003	0.011	0.350	0.637			0.166	0.134	0.402	0.297			0.142	0.190	0.336	0.332			0.171	0.193	0.310	0.326		
MF	0.003	0.011	0.350	0.637			0.166	0.134	0.402	0.297			0.142	0.190	0.336	0.332			0.171	0.193	0.310	0.326		
SF LI	0.003	0.011	0.350	0.637			0.166	0.134	0.402	0.297			0.142	0.190	0.336	0.332			0.171	0.193	0.310	0.326		
MF LI	0.003	0.011	0.350	0.637			0.166	0.134	0.402	0.297			0.142	0.190	0.336	0.332			0.171	0.193	0.310	0.326		

Building Type	End Use 13						End Use 14						End Use 15					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.158	0.174	0.238	0.430			0.095	0.196	0.297	0.411			0.181	0.243	0.260	0.316		
MF	0.158	0.174	0.238	0.430			0.095	0.196	0.297	0.411			0.181	0.243	0.260	0.316		
SF LI	0.158	0.174	0.238	0.430			0.095	0.196	0.297	0.411			0.181	0.243	0.260	0.316		
MF LI	0.158	0.174	0.238	0.430			0.095	0.196	0.297	0.411			0.181	0.243	0.260	0.316		

Peak To Energy Relationship Table (Utility Coincidence)

Peak = Average kW * Factor

Building Type	End Use 1						End Use 2						End Use 3						End Use 4					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	1.561	4.171	0.000	0.000			0.448	2.457	1.135	1.964			0.624	1.078	0.930	0.949			0.620	1.055	0.893	0.871		
MF	1.561	4.171	0.000	0.000			0.448	2.457	1.135	1.964			0.624	1.078	0.930	0.949			0.620	1.055	0.893	0.871		
SF LI	1.561	4.171	0.000	0.000			0.448	2.457	1.135	1.964			0.624	1.078	0.930	0.949			0.620	1.055	0.893	0.871		
MF LI	1.561	4.171	0.000	0.000			0.448	2.457	1.135	1.964			0.624	1.078	0.930	0.949			0.620	1.055	0.893	0.871		

Building Type	End Use 5						End Use 6						End Use 7						End Use 8					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.593	1.052	1.034	1.421			0.536	0.906	0.303	0.359			0.528	1.468	0.669	1.411			0.575	1.871	1.149	0.348		
MF	0.593	1.052	1.034	1.421			0.536	0.906	0.303	0.359			0.528	1.468	0.669	1.411			0.575	1.871	1.149	0.348		
SF LI	0.593	1.052	1.034	1.421			0.536	0.906	0.303	0.359			0.528	1.468	0.669	1.411			0.575	1.871	1.149	0.348		
MF LI	0.593	1.052	1.034	1.421			0.536	0.906	0.303	0.359			0.528	1.468	0.669	1.411			0.575	1.871	1.149	0.348		

Building Type	End Use 9						End Use 10						End Use 11						End Use 12					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
SF	0.000	0.000	2.620	2.054			0.952	0.643	1.866	0.572			0.528	3.488	1.348	2.859			0.377	0.092	0.141	0.091		
MF	0.000	0.000	2.620	2.054			0.952	0.643	1.866	0.572			0.528	3.488	1.348	2.859			0.377	0.092	0.141	0.091		

APPENDIX D

COMMERCIAL

BUILDING AND TOU FACTOR INPUTS

Commercial Building Stock Table

Units Square Feet										
Segment	Office	Restaurant	Retail	Grocery	Warehouse	School	College	Health	Lodging	Other
Existing	463,820,483	34,302,109	254,136,292	37,472,313	243,442,265	151,418,968	90,993,992	121,893,036	69,120,379	364,333,021
New	5,327,326	393,985	2,918,946	430,398	2,796,117	1,739,160	1,045,134	1,400,033	793,899	4,184,638

End Use Definition	
End Use	End Use Definition
1	Indoor Lighting
2	Outdoor Lighting
3	Cooling
4	Ventilation
5	Refrigeration
6	Office Equipment
7	Water Heating
8	Vending
9	Cooking
10	Heating
11	Miscellaneous
12	Whole Building

End Use Load Shape Table

Fraction of Annual Use in Cost Period

Building Type	End Use 1						End Use 2						End Use 3					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.1583	0.1755044	0.3474167	0.3187649			0.0626	0.2483295	0.1785233	0.51058277			0.29747	0.224629	0.293898	0.1840051		
Restaurant	0.1581	0.1774733	0.3419325	0.3225294			0.0792	0.23505	0.2064985	0.47922882			0.28604	0.259235	0.273678	0.1810488		
Retail	0.1470	0.18777918	0.3217809	0.3434252			0.0833	0.2354252	0.2075221	0.4737165			0.34533	0.255495	0.261935	0.1372353		
Grocery	0.1298	0.2047812	0.2857026	0.3797185			0.0645	0.2445758	0.1848564	0.50603094			0.28938	0.287231	0.239439	0.1839492		
Warehouse	0.1515	0.1810436	0.3352559	0.3321996			0.0573	0.24737	0.1763342	0.51897948			0.4303	0.250787	0.240466	0.0784514		
School	0.1366	0.1623176	0.3672005	0.3339148			0.0686	0.2412992	0.1876342	0.50242801			0.39274	0.188653	0.330382	0.0882276		
College	0.1518	0.1549213	0.3811083	0.3122005			0.0521	0.2495477	0.1717281	0.52658511			0.29675	0.228741	0.289174	0.1853369		
Health	0.1284	0.2068107	0.2820069	0.3827417			0.0599	0.2490227	0.1754844	0.51561884			0.24869	0.289508	0.242882	0.2189245		
Lodging	0.1205	0.2148209	0.2648264	0.399872			0.0597	0.2496956	0.1730326	0.51753426			0.25061	0.294054	0.229163	0.2261716		
Other	0.1473	0.1858344	0.3254919	0.3414202			0.0837	0.2281624	0.2189164	0.46920837			0.33897	0.268641	0.242422	0.1499641		

Building Type	End Use 4						End Use 5						End Use 6					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.154	0.197	0.307	0.343			0.113	0.222	0.250	0.415			0.131	0.203	0.291	0.375		
Restaurant	0.147	0.216	0.292	0.345			0.118	0.225	0.251	0.407			0.158	0.178	0.341	0.323		
Retail	0.156	0.202	0.314	0.329			0.119	0.228	0.249	0.404			0.151	0.184	0.330	0.335		
Grocery	0.127	0.219	0.268	0.386			0.125	0.233	0.247	0.395			0.145	0.190	0.318	0.348		
Warehouse	0.174	0.194	0.304	0.328			0.141	0.261	0.232	0.366			0.155	0.179	0.342	0.324		
School	0.167	0.146	0.370	0.317			0.114	0.224	0.250	0.413			0.128	0.174	0.346	0.352		
College	0.156	0.185	0.327	0.332			0.115	0.219	0.256	0.410			0.138	0.164	0.357	0.341		
Health	0.118	0.223	0.249	0.410			0.115	0.223	0.251	0.411			0.127	0.207	0.282	0.384		
Lodging	0.119	0.226	0.243	0.411			0.115	0.222	0.252	0.411			0.126	0.210	0.276	0.388		
Other	0.157	0.206	0.292	0.345			0.118	0.228	0.248	0.406			0.148	0.185	0.330	0.337		

Building Type	End Use 7						End Use 8						End Use 9					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.119	0.186	0.301	0.394			0.141	0.194	0.310	0.355	0.383	0.282	0.173	0.162	0.383	0.282		
Restaurant	0.145	0.163	0.358	0.334			0.144	0.191	0.312	0.352			0.157	0.178	0.343	0.322		
Retail	0.135	0.169	0.340	0.356			0.148	0.187	0.323	0.341			0.157	0.179	0.342	0.322		
Grocery	0.129	0.179	0.320	0.372			0.131	0.204	0.287	0.379			0.127	0.208	0.282	0.383		
Warehouse	0.134	0.171	0.338	0.358			0.151	0.185	0.330	0.335			0.168	0.165	0.374	0.293		
School	0.131	0.165	0.373	0.330			0.118	0.167	0.356	0.359			0.126	0.156	0.381	0.338		
College	0.152	0.146	0.392	0.310			0.134	0.162	0.350	0.353			0.147	0.170	0.350	0.334		
Health	0.115	0.186	0.297	0.402			0.127	0.208	0.281	0.384			0.146	0.189	0.319	0.346		
Lodging	0.110	0.193	0.280	0.417			0.128	0.209	0.276	0.386			0.149	0.192	0.315	0.344		
Other	0.128	0.174	0.325	0.373			0.144	0.189	0.318	0.349			0.141	0.194	0.310	0.355		

Building Type	End Use 10						End Use 11						End Use 12					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.063	0.138	0.273	0.526			0.141	0.194	0.310	0.355			0.172	0.198	0.306	0.324		
Restaurant	0.007	0.027	0.337	0.629			0.144	0.191	0.312	0.352			0.161	0.207	0.298	0.334		
Retail	0.008	0.048	0.247	0.697			0.148	0.187	0.323	0.341			0.173	0.205	0.300	0.323		
Grocery	0.005	0.019	0.149	0.828			0.131	0.204	0.287	0.379			0.136	0.228	0.258	0.378		
Warehouse	0.003	0.026	0.311	0.661			0.151	0.185	0.330	0.335			0.158	0.215	0.287	0.341		
School	0.006	0.022	0.234	0.737			0.118	0.167	0.356	0.359			0.169	0.175	0.332	0.324		
College	0.088	0.151	0.310	0.451			0.134	0.162	0.350	0.353			0.160	0.181	0.330	0.328		
Health	0.061	0.185	0.228	0.526			0.127	0.208	0.281	0.384			0.145	0.227	0.262	0.366		
Lodging	0.028	0.086	0.177	0.709			0.128	0.209	0.276	0.386			0.142	0.227	0.251	0.379		
Other	0.025	0.060	0.227	0.688			0.144	0.189	0.318	0.349			0.158	0.206	0.291	0.346		

APPENDIX D

COMMERCIAL

BUILDING AND TOU FACTOR INPUTS

Peak To Energy Relationship Table (Utility Coincidence)

Peak = Average kW * Factor

Building Type	End Use 1						End Use 2						End Use 3					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.760	0.731	0.842	0.715			0.142	1.825	2.152	1.671			1.490	0.974	0.779	1.056		
Restaurant	0.805	1.084	1.018	1.119			0.539	1.905	2.104	1.760			1.325	1.324	1.825	0.779		
Retail	0.794	0.684	0.863	0.707			0.506	1.946	2.376	1.822			1.455	0.971	1.769	0.597		
Grocery	0.758	0.948	0.990	0.956			0.238	1.797	2.106	1.635			1.390	1.302	1.885	0.983		
Warehouse	0.755	0.772	0.833	0.775			0.152	1.840	2.311	1.649			1.369	1.501	1.111	1.430		
School	0.648	0.557	0.500	0.509			0.375	2.041	2.426	1.850			0.791	0.351	0.063	0.068		
College	0.902	1.103	1.026	1.066			0.029	1.808	2.630	1.613			1.249	1.127	1.465	0.608		
Health	0.765	0.804	0.914	0.760			0.101	1.768	1.969	1.607			1.366	1.221	1.443	1.672		
Lodging	0.758	1.093	1.214	1.095			0.093	1.829	2.200	1.662			1.456	1.377	1.789	0.480		
Other	0.747	0.685	0.804	0.699			0.596	2.094	2.514	1.925			1.466	1.188	1.152	0.472		

Building Type	End Use 4						End Use 5						End Use 6					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	1.205	0.914	0.859	0.842			0.887	0.973	0.952	0.977			0.682	0.808	0.740	0.821		
Restaurant	1.068	1.120	1.066	1.107			0.913	0.995	0.994	0.998			0.799	0.908	0.967	0.931		
Retail	1.090	0.934	1.018	0.911			0.914	0.982	0.996	0.997			0.764	0.634	0.745	0.655		
Grocery	1.027	0.999	1.032	1.003			0.928	1.001	1.019	1.034			0.797	0.746	0.903	0.763		
Warehouse	1.082	1.206	0.845	1.047			0.967	1.047	1.106	1.118			0.692	0.600	0.664	0.614		
School	0.707	0.341	0.329	0.894			0.873	0.971	0.925	0.968			0.439	0.715	0.406	0.671		
College	1.091	1.023	1.066	1.154			0.928	1.027	1.003	1.018			0.833	0.914	0.887	0.901		
Health	1.049	0.990	0.990	0.976			0.901	0.969	0.966	0.962			0.722	0.753	0.737	0.751		
Lodging	1.081	1.024	1.053	1.004			0.910	0.981	0.992	0.980			0.772	0.928	0.937	0.937		
Other	1.119	0.978	0.941	0.960			0.911	0.984	0.988	0.974			0.668	0.615	0.651	0.631		

Building Type	End Use 7						End Use 8						End Use 9					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.734	0.852	0.822	0.813			0.669	0.727	0.707	0.747			0.559	0.244	0.425	0.252		
Restaurant	0.755	0.703	0.816	0.755			0.876	1.177	1.089	1.193			0.842	0.884	1.025	0.924		
Retail	0.769	0.627	0.740	0.626			0.777	0.737	0.863	0.764			0.744	0.440	0.676	0.462		
Grocery	0.800	0.719	0.902	0.689			0.785	0.732	0.897	0.739			0.705	0.614	0.843	0.622		
Warehouse	0.753	0.744	0.657	0.681			0.805	0.967	0.933	0.982			0.631	0.324	0.565	0.331		
School	0.390	0.447	0.386	0.533			0.491	0.578	0.401	0.559			0.387	0.247	0.223	0.227		
College	0.838	1.212	0.932	1.328			0.904	1.224	1.002	1.054			0.881	1.103	1.013	1.087		
Health	0.718	0.815	0.700	0.742			0.707	0.743	0.739	0.718			0.842	0.528	0.862	0.266		
Lodging	0.792	0.826	1.008	0.821			0.813	1.027	1.128	1.025			0.884	0.881	1.102	0.889		
Other	0.752	0.875	0.897	0.936			0.748	0.746	0.835	0.759			0.756	0.736	0.924	0.743		

Building Type	End Use 10						End Use 11						End Use 12					
	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF	SON	SOFF	WON	WOFF	SHON	SHOF
Office	0.699	0.706	0.898	0.518			0.669	0.727	0.707	0.747			0.873	0.882	0.826	0.853		
Restaurant	0.201	0.746	0.106	1.103			0.876	1.177	1.089	1.193			0.848	1.104	1.159	1.046		
Retail	0.577	0.187	0.084	0.561			0.777	0.737	0.863	0.764			0.876	0.883	1.068	0.850		
Grocery	0.175	0.362	0.051	0.502			0.785	0.732	0.897	0.739			0.802	1.013	1.072	1.001		
Warehouse	0.193	0.237	0.108	0.064			0.805	0.967	0.933	0.982			0.803	1.003	0.958	0.978		
School	1.959	0.184	1.353	1.186			0.491	0.578	0.401	0.559			0.584	0.740	0.527	0.817		
College	0.616	1.557	0.782	1.851			0.904	1.224	1.002	1.054			0.863	1.184	1.128	1.162		
Health	0.581	0.822	0.724	0.706			0.707	0.743	0.739	0.718			0.837	0.964	0.999	0.937		
Lodging	0.656	0.593	0.361	2.106			0.813	1.027	1.128	1.025			0.876	1.158	1.269	1.078		
Other	0.679	0.640	0.456	1.746			0.748	0.746	0.835	0.759			0.820	0.989	0.991	0.943		

Industrial Building Stock Table

Units: Base kWh																	
Segment	Food	Textiles-Apparel	Lumber-Furniture	Paper	Printing	Chemicals	Petroleum	Rubber-Plastics	Stone-Clay-Glass	Prim Metals	Fab Metals	Ind Mach	Electronics	Transp Equip	Misc Ind	Water/WW	
All	1,375,767,383	19,545,829	533,878,290	3,172,874,901	403,029,558	#####	1,301,886,673	690,399,168	710,497,156	2,859,613,429	632,921,378	567,134,641	181,638,526	875,777,739	123,566,478	239,817,217	

End Use Load Shape Table
(Fraction of annual energy)

Building Type	End Use 1 - Compressed Air						End Use 2 - Fans						End Use 3 - Pumping					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
Food	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000
Textiles-Apparel	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000
Lumber-Furniture	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000
Paper	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000
Chemicals	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000
Petroleum	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Rubber-Plastics	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Non-Met. Minerals	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000
Prim. Metals w/o Steel	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000
Fab. Metals	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000
Steel	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000
Ind. Machinery	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000
Electronics	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000
Transport.Eqp.	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000
Printing	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000
Misc. Manuf.	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000

Building Type	End Use 4 -Drives						End Use 5 - Heating						End Use 6 - Refrigeration					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
Food	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000
Textiles-Apparel	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000
Lumber-Furniture	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000
Paper	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000
Chemicals	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000
Petroleum	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Rubber-Plastics	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Non-Met. Minerals	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000
Prim. Metals w/o Steel	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000
Fab. Metals	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000
Steel	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000
Ind. Machinery	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000
Electronics	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000
Transport.Eqp.	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000
Printing	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000
Misc. Manuf.	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000

Building Type	End Use 7 -Other Process						End Use 8 - Cooling						End Use 9 - Lighting					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF	SuON	SuOFF	WON	WOFF	ShON	ShOFF
Food	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000	0.116	0.205	0.263	0.415	0.000	0.000
Textiles-Apparel	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000	0.388	0.433	0.104	0.076	0.000	0.000
Lumber-Furniture	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000	0.141	0.209	0.273	0.377	0.000	0.000
Paper	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000	0.079	0.161	0.274	0.486	0.000	0.000
Chemicals	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000	0.127	0.231	0.244	0.398	0.000	0.000
Petroleum	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Rubber-Plastics	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000	0.117	0.307	0.196	0.380	0.000	0.000
Non-Met. Minerals	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000	0.132	0.233	0.251	0.384	0.000	0.000
Prim. Metals w/o Steel	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000	0.108	0.220	0.241	0.431	0.000	0.000
Fab. Metals	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000	0.139	0.185	0.313	0.364	0.000	0.000
Steel	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000	0.135	0.219	0.267	0.380	0.000	0.000
Ind. Machinery	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000	0.189	0.160	0.341	0.310	0.000	0.000
Electronics	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000	0.122	0.223	0.253	0.402	0.000	0.000
Transport.Eqp.	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000	0.138	0.205	0.281	0.376	0.000	0.000
Printing	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000
Misc. Manuf.	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000	0.109	0.214	0.244	0.433	0.000	0.000

Building Type	End Use 10 - Other					
	SuON	SuOFF	WON	WOFF	ShON	ShOFF
Food	0.116	0.205	0.263	0.415	0.000	0.000
Textiles-Apparel	0.388	0.433	0.104	0.076	0.000	0.000
Lumber-Furniture	0.141	0.209	0.273	0.377	0.000	0.000
Paper	0.079	0.161	0.274	0.486	0.000	0.000
Chemicals	0.127	0.231	0.244	0.398	0.000	0.000
Petroleum	0.117	0.307	0.196	0.380	0.000	0.000
Rubber-Plastics	0.117	0.307	0.196	0.380	0.000	0.000
Non-Met. Minerals	0.132	0.233	0.251	0.384	0.000	0.000
Prim. Metals w/o Steel	0.108	0.220	0.241	0.431	0.000	0.000
Fab. Metals	0.139	0.185	0.313	0.364	0.000	0.000
Steel	0.135	0.219	0.267	0.380	0.000	0.000
Ind. Machinery	0.189	0.160	0.341	0.310	0.000	0.000
Electronics	0.122	0.223	0.253	0.402	0.000	0.000
Transport.Eqp.	0.138	0.205	0.281	0.376	0.000	0.000
Printing	0.109	0.214	0.244	0.433	0.000	0.000
Misc. Manuf.	0.109	0.214	0.244	0.433	0.000	0.000

Peak To Energy Relationship Table (Utility Coincidence)
(Ratio of peak kW to average kW)

APPENDIX D

RESIDENTIAL BUILDING AND TOU FACTOR INPUTS

Residential Building Stock Table

Units: Number of Dwellings				
Segment	Sngl Fam	Mult Fam	SF LI	MF LI
Existing	954,605	72,294	312,188	26,614
New Construction	4,773	361	1,561	133

End Use Definition	
End Use	End Use Definition
1	Heating
2	Water Heating
3	Clothes Drying
4	Cooking
5	Other
6	House

End Use Load Shape Table

Fraction of Annual Use in Cost Period

Building	End Use 1		End Use 2		End Use 3		End Use 4		End Use 5		End Use 6	
Type	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
SF	0.841	0.159	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583	0.720	0.280
MF	0.841	0.159	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583	0.720	0.280
SF LI	0.841	0.159	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583	0.720	0.280
MF LI	0.841	0.159	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583	0.720	0.280

Peak To Energy Relationship Table (Utility Coincidence)

Peak = Average kW * Factor

Building	End Use 1		End Use 2		End Use 3		End Use 4		End Use 5		End Use 6	
Type	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
SF	2.326	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	2.108	1.000
MF	2.326	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	2.108	1.000
SF LI	2.326	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	2.108	1.000
MF LI	2.326	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	2.108	1.000

APPENDIX D

COMMERCIAL BUILDING AND TOU FACTOR INPUTS

Commercial Building Stock Table

Units: Square Feet										
Segment	Office	Restaurant	Retail	Grocery	Warehouse	School	College	Health	Lodging	Other
Existing	421,450,355	31,737,400	230,038,586	33,895,755	207,071,093	136,516,521	82,020,953	112,670,832	62,489,361	329,860,330
New	4,840,673	364,528	2,642,166	389,318	2,378,367	1,567,995	942,072	1,294,109	717,737	3,788,693

End Use Definition	
End Use	End Use Definition
1	Heating
2	Water Heating
3	Cooking
4	Other
5	Whole Building

End Use Load Shape Table

Fraction of Annual Use in Cost Period

Building Type	End Use 1		End Use 2		End Use 3		End Use 4		End Use 5	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
Office	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Restaurant	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Retail	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Grocery	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Warehouse	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
School	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
College	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Health	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Lodging	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583
Other	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583	0.417	0.583

Peak To Energy Relationship Table (Utility Coincidence)

Peak = Average kW * Factor

Building Type	End Use 1		End Use 2		End Use 3		End Use 4		End Use 5	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
Office	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Restaurant	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Retail	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Grocery	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Warehouse	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
School	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
College	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Health	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lodging	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Other	2.814	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

APPENDIX D

INDUSTRIAL

BUILDING AND TOU FACTOR INPUTS

Industrial Building Stock Table

Units: Base Therms																
Segment	Food	Textiles-Apparel	Lumber-Furniture	Paper	Printing	Chemicals	Petroleum	Rubber-Plastics	Stone-Clay-Glass	Prim Metals	Fab Metals	Ind Mach	Electronics	Transp Equip	Misc Ind	Water/WW
All	68,311,898	753,987	18,180,181	79,527,517	7,877,184	180,938,619	118,891,060	10,623,186	47,000,858	77,171,596	23,260,589	9,379,283	2,566,808	24,408,956	2,084,296	23,982

End Use Load Shape Table

(Fraction of annual energy)

Building Type	End Use 1 - Proc Heat		End Use 2- HVAC		End Use 3- Boiler		End Use 4- CHP		End Use 5 - Other	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
Food	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Textiles-Apparel	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Lumber-Furniture	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Paper	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Printing	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Chemicals	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Petroleum	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Rubber-Plastics	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Stone-Clay-Glass	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Prim Metals	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Fab Metals	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Ind Mach	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Electronics	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Transp Equip	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Misc Ind	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583
Water/WW	0.417	0.583	0.848	0.152	0.417	0.583	0.417	0.583	0.417	0.583

Peak To Energy Relationship Table (Utility Coincidence)

(Ratio of peak therms to average therms)

Building Type	End Use 1 - Proc Heat		End Use 2- HVAC		End Use 3- Boiler		End Use 4- CHP		End Use 5 - Other	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
Food	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Textiles-Apparel	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lumber-Furniture	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Paper	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Printing	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Chemicals	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Petroleum	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Rubber-Plastics	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Stone-Clay-Glass	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Prim Metals	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Fab Metals	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Ind Mach	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Electronics	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Transp Equip	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Misc Ind	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Water/WW	1.000	1.000	3.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000