

Table 3. Energy Consumption by Sector and Source
(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Residential													
Liquefied Petroleum Gases	0.128	0.121	0.126	0.129	0.126	0.126	0.127	0.129	0.131	0.132	0.134	0.136	0.137
Kerosene	0.008	0.007	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Distillate Fuel Oil	0.044	0.038	0.042	0.044	0.042	0.041	0.041	0.041	0.041	0.041	0.041	0.042	0.041
Liquid Fuels and Other Petroleum Subtotal	0.181	0.165	0.176	0.181	0.176	0.173	0.175	0.177	0.179	0.181	0.182	0.184	0.185
Natural Gas	1.440	1.272	1.393	1.412	1.428	1.392	1.401	1.413	1.417	1.423	1.430	1.439	1.437
Coal	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Renewable Energy 1/	0.109	0.096	0.109	0.117	0.110	0.104	0.102	0.101	0.100	0.098	0.097	0.096	0.095
Electricity	0.664	0.636	0.666	0.671	0.672	0.677	0.679	0.683	0.662	0.660	0.659	0.662	0.662
Delivered Energy	2.396	2.171	2.345	2.383	2.387	2.348	2.359	2.376	2.359	2.364	2.370	2.383	2.381
Electricity Related Losses	1.577	1.511	1.574	1.599	1.626	1.649	1.673	1.696	1.670	1.670	1.646	1.650	1.643
Total	3.974	3.682	3.919	3.982	4.013	3.997	4.032	4.073	4.029	4.034	4.016	4.034	4.024
Commercial													
Liquefied Petroleum Gases	0.019	0.018	0.020	0.020	0.019	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Motor Gasoline 2/	0.007	0.007	0.008	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.008	0.008	0.008
Kerosene	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Distillate Fuel Oil	0.039	0.038	0.038	0.039	0.033	0.033	0.034	0.035	0.036	0.036	0.037	0.037	0.038
Residual Fuel Oil	0.003	0.003	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Liquid Fuels and Other Petroleum Subtotal	0.071	0.069	0.071	0.071	0.063	0.065	0.066	0.067	0.068	0.068	0.069	0.070	0.070
Natural Gas	0.727	0.674	0.714	0.728	0.702	0.701	0.712	0.722	0.731	0.740	0.749	0.756	0.762
Coal	0.025	0.025	0.020	0.026	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Renewable Energy 3/	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027
Electricity	0.624	0.623	0.647	0.649	0.659	0.664	0.674	0.684	0.696	0.710	0.723	0.735	0.747
Delivered Energy	1.474	1.418	1.479	1.501	1.475	1.483	1.504	1.525	1.547	1.571	1.593	1.614	1.631
Electricity Related Losses	1.482	1.480	1.527	1.549	1.594	1.619	1.661	1.699	1.755	1.796	1.804	1.833	1.852
Total	2.956	2.898	3.006	3.049	3.069	3.102	3.165	3.224	3.302	3.367	3.397	3.447	3.483
Industrial 4/													
Liquefied Petroleum Gases	0.094	0.094	0.096	0.096	0.093	0.092	0.091	0.089	0.087	0.086	0.085	0.084	0.082
Motor Gasoline 2/	0.055	0.054	0.054	0.055	0.053	0.053	0.054	0.054	0.053	0.053	0.053	0.053	0.052
Distillate Fuel Oil	0.176	0.177	0.184	0.190	0.182	0.183	0.182	0.179	0.175	0.174	0.174	0.173	0.172
Residual Fuel Oil	0.021	0.022	0.022	0.022	0.020	0.019	0.018	0.018	0.017	0.016	0.023	0.022	0.020
Petrochemical Feedstocks	0.139	0.138	0.125	0.126	0.128	0.132	0.135	0.137	0.140	0.139	0.138	0.136	0.135
Other Petroleum 5/	0.651	0.631	0.608	0.608	0.485	0.577	0.591	0.595	0.610	0.609	0.606	0.603	0.599
Liquid Fuels and Other Petroleum Subtotal	1.136	1.116	1.089	1.096	0.961	1.056	1.073	1.073	1.081	1.077	1.078	1.071	1.061
Natural Gas	1.167	1.133	1.166	1.221	1.238	1.196	1.201	1.206	1.179	1.169	1.170	1.166	1.163
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Lease and Plant Fuel 6/	0.012	0.019	0.011	0.010	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.011	0.012
Natural Gas Subtotal	1.179	1.152	1.177	1.231	1.248	1.207	1.211	1.217	1.190	1.180	1.182	1.177	1.175
Metallurgical Coal	0.295	0.288	0.294	0.305	0.293	0.282	0.273	0.262	0.252	0.248	0.244	0.242	0.240
Other Industrial Coal	0.334	0.332	0.347	0.363	0.359	0.353	0.346	0.338	0.329	0.327	0.325	0.324	0.323
Coal-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.027	0.000	0.000	0.001	0.013	0.049
Net Coal Coke Imports	0.227	0.313	0.140	0.337	0.152	0.152	0.153	0.153	0.152	0.152	0.152	0.153	0.154
Coal Subtotal	0.856	0.933	0.781	1.005	0.804	0.787	0.789	0.780	0.733	0.726	0.723	0.732	0.765
Biofuels Heat and Coproducts	0.053	0.065	0.087	0.131	0.161	0.194	0.194	0.221	0.238	0.243	0.261	0.289	0.305
Renewable Energy 7/	0.140	0.141	0.145	0.147	0.137	0.141	0.145	0.146	0.147	0.149	0.151	0.152	0.154
Electricity	0.731	0.719	0.729	0.728	0.743	0.757	0.768	0.773	0.771	0.771	0.774	0.776	0.777
Delivered Energy	4.095	4.126	4.008	4.338	4.053	4.142	4.180	4.211	4.161	4.145	4.168	4.199	4.236
Electricity Related Losses	1.736	1.706	1.721	1.737	1.797	1.844	1.894	1.920	1.944	1.951	1.931	1.935	1.927
Total	5.831	5.833	5.729	6.076	5.850	5.986	6.075	6.131	6.106	6.096	6.099	6.134	6.162

Table 3. Energy Consumption by Sector and Source
(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Transportation													
Liquefied Petroleum Gases	0.003	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
E85 8/	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.228
Motor Gasoline 2/	2.593	2.619	2.638	2.589	2.555	2.532	2.508	2.505	2.502	2.495	2.488	2.479	2.255
Jet Fuel 9/	0.269	0.265	0.266	0.272	0.278	0.286	0.295	0.303	0.306	0.311	0.315	0.320	0.324
Distillate Fuel Oil 10/	0.909	0.938	0.951	0.947	0.955	0.980	1.006	1.022	1.032	1.041	1.051	1.063	1.071
Residual Fuel Oil	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Petroleum 11/	0.026	0.025	0.024	0.023	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
Liquid Fuels and Other Petroleum Subtotal	3.803	3.854	3.885	3.838	3.818	3.829	3.839	3.861	3.871	3.877	3.885	3.892	3.907
Pipeline Fuel Natural Gas	0.064	0.063	0.063	0.062	0.064	0.063	0.063	0.063	0.062	0.062	0.062	0.062	0.062
Compressed Natural Gas	0.002	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.006	0.006	0.007	0.007	0.007
Electricity	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Delivered Energy	3.871	3.922	3.954	3.906	3.889	3.899	3.910	3.933	3.942	3.949	3.956	3.964	3.979
Electricity Related Losses	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Total	3.877	3.928	3.960	3.912	3.895	3.905	3.917	3.939	3.948	3.955	3.962	3.970	3.985
Delivered Energy Consumption, All Sectors													
Liquefied Petroleum Gases	0.245	0.236	0.245	0.249	0.241	0.241	0.241	0.242	0.241	0.241	0.242	0.243	0.242
E85 8/	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.228
Motor Gasoline 2/	2.655	2.681	2.699	2.651	2.615	2.593	2.569	2.566	2.562	2.556	2.548	2.539	2.315
Jet Fuel 9/	0.269	0.265	0.266	0.272	0.278	0.286	0.295	0.303	0.306	0.311	0.315	0.320	0.324
Kerosene	0.013	0.011	0.011	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Distillate Fuel Oil	1.168	1.191	1.215	1.219	1.211	1.237	1.264	1.278	1.284	1.292	1.303	1.314	1.321
Residual Fuel Oil	0.027	0.028	0.029	0.028	0.026	0.025	0.024	0.024	0.023	0.022	0.028	0.028	0.026
Petrochemical Feedstocks	0.139	0.138	0.125	0.126	0.128	0.132	0.135	0.137	0.140	0.139	0.138	0.136	0.135
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Petroleum 12/	0.675	0.654	0.631	0.629	0.507	0.599	0.613	0.617	0.632	0.631	0.628	0.625	0.621
Liquid Fuels and Other Petroleum Subtotal	5.191	5.204	5.222	5.186	5.017	5.124	5.153	5.179	5.199	5.203	5.213	5.217	5.224
Natural Gas	3.336	3.081	3.276	3.364	3.372	3.295	3.319	3.347	3.333	3.339	3.356	3.368	3.370
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Lease and Plant Fuel 6/	0.012	0.019	0.011	0.010	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.011	0.012
Pipeline Natural Gas	0.064	0.063	0.063	0.062	0.064	0.063	0.063	0.063	0.062	0.062	0.062	0.062	0.062
Natural Gas Subtotal	3.412	3.163	3.350	3.436	3.446	3.368	3.392	3.421	3.407	3.413	3.430	3.442	3.443
Metallurgical Coal	0.295	0.288	0.294	0.305	0.293	0.282	0.273	0.262	0.252	0.248	0.244	0.242	0.240
Other Coal	0.361	0.359	0.370	0.391	0.386	0.380	0.373	0.365	0.356	0.354	0.352	0.351	0.350
Coal-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.027	0.000	0.000	0.001	0.013	0.049
Net Coal Coke Imports	0.227	0.313	0.140	0.337	0.152	0.152	0.153	0.153	0.152	0.152	0.152	0.153	0.154
Coal Subtotal	0.882	0.960	0.803	1.033	0.831	0.814	0.816	0.807	0.760	0.753	0.749	0.759	0.792
Biofuels Heat and Coproducts	0.053	0.065	0.087	0.131	0.161	0.194	0.194	0.221	0.238	0.243	0.261	0.289	0.305
Renewable Energy 13/	0.276	0.265	0.281	0.291	0.274	0.273	0.274	0.275	0.274	0.274	0.275	0.276	0.276
Electricity	2.022	1.981	2.044	2.051	2.076	2.100	2.123	2.141	2.132	2.143	2.158	2.176	2.188
Delivered Energy	11.836	11.638	11.787	12.128	11.805	11.873	11.954	12.044	12.010	12.028	12.087	12.160	12.227
Electricity Related Losses	4.801	4.703	4.827	4.891	5.022	5.118	5.234	5.322	5.375	5.423	5.388	5.425	5.428
Total	16.638	16.341	16.614	17.020	16.827	16.991	17.188	17.367	17.385	17.452	17.475	17.585	17.655

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(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power 14/													
Distillate Fuel Oil	0.038	0.030	0.034	0.034	0.034	0.035	0.037	0.037	0.036	0.032	0.029	0.028	0.028
Residual Fuel Oil	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Liquid Fuels and Other Petroleum Subtotal	0.038	0.030	0.034	0.034	0.035	0.035	0.037	0.037	0.036	0.032	0.029	0.028	0.028
Natural Gas	0.316	0.257	0.413	0.511	0.587	0.530	0.514	0.507	0.463	0.462	0.464	0.463	0.438
Steam Coal	4.790	4.717	4.728	4.691	4.759	4.854	4.945	5.038	5.104	5.149	5.105	5.130	5.148
Nuclear Power	1.582	1.575	1.588	1.583	1.572	1.573	1.578	1.581	1.581	1.581	1.581	1.581	1.581
Renewable Energy 15/	0.092	0.097	0.102	0.118	0.138	0.218	0.274	0.293	0.315	0.335	0.358	0.389	0.412
Electricity Imports	-0.008	-0.005	-0.007	-0.007	-0.006	-0.004	-0.004	-0.005	-0.005	-0.005	-0.003	-0.004	-0.004
Total 16/	6.823	6.683	6.871	6.942	7.098	7.218	7.357	7.464	7.507	7.566	7.546	7.601	7.616
Total Energy Consumption													
Liquefied Petroleum Gases	0.245	0.236	0.245	0.249	0.241	0.241	0.241	0.242	0.241	0.241	0.242	0.243	0.242
E85 8/	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.228
Motor Gasoline 2/	2.655	2.681	2.699	2.651	2.615	2.593	2.569	2.566	2.562	2.556	2.548	2.539	2.315
Jet Fuel 9/	0.269	0.265	0.266	0.272	0.278	0.286	0.295	0.303	0.306	0.311	0.315	0.320	0.324
Kerosene	0.013	0.011	0.011	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Distillate Fuel Oil	1.206	1.221	1.249	1.253	1.246	1.272	1.300	1.315	1.320	1.323	1.331	1.343	1.349
Residual Fuel Oil	0.027	0.028	0.029	0.028	0.026	0.025	0.024	0.024	0.023	0.022	0.028	0.028	0.026
Petrochemical Feedstocks	0.139	0.138	0.125	0.126	0.128	0.132	0.135	0.137	0.140	0.139	0.138	0.136	0.135
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Petroleum 12/	0.675	0.654	0.631	0.629	0.507	0.599	0.613	0.617	0.632	0.631	0.628	0.625	0.621
Liquid Fuels and Other Petroleum Subtotal	5.228	5.235	5.256	5.220	5.052	5.159	5.191	5.216	5.235	5.235	5.242	5.246	5.252
Natural Gas	3.652	3.338	3.689	3.875	3.959	3.825	3.833	3.854	3.797	3.801	3.820	3.831	3.808
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Lease and Plant Fuel 6/	0.012	0.019	0.011	0.010	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.011	0.012
Pipeline Natural Gas	0.064	0.063	0.063	0.062	0.064	0.063	0.063	0.063	0.062	0.062	0.062	0.062	0.062
Natural Gas Subtotal	3.728	3.420	3.763	3.947	4.032	3.898	3.907	3.928	3.870	3.874	3.893	3.905	3.881
Metallurgical Coal	0.295	0.288	0.294	0.305	0.293	0.282	0.273	0.262	0.252	0.248	0.244	0.242	0.240
Other Coal	5.151	5.076	5.098	5.082	5.146	5.234	5.318	5.403	5.460	5.503	5.457	5.481	5.497
Coal-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.027	0.000	0.000	0.001	0.013	0.049
Net Coal Coke Imports	0.227	0.313	0.140	0.337	0.152	0.152	0.153	0.153	0.152	0.152	0.152	0.153	0.154
Coal Subtotal	5.672	5.677	5.531	5.723	5.590	5.668	5.761	5.845	5.864	5.902	5.854	5.889	5.940
Nuclear Power	1.582	1.575	1.588	1.583	1.572	1.573	1.578	1.581	1.581	1.581	1.581	1.581	1.581
Biofuels Heat and Coproducts	0.053	0.065	0.087	0.131	0.161	0.194	0.194	0.221	0.238	0.243	0.261	0.289	0.305
Renewable Energy 17/	0.368	0.362	0.383	0.409	0.412	0.491	0.548	0.568	0.589	0.609	0.633	0.665	0.688
Electricity Imports	-0.008	-0.005	-0.007	-0.007	-0.006	-0.004	-0.004	-0.005	-0.005	-0.005	-0.003	-0.004	-0.004
Total	16.638	16.341	16.614	17.020	16.827	16.991	17.188	17.367	17.385	17.452	17.475	17.585	17.655
Energy Use & Related Statistics													
Delivered Energy Use	11.836	11.638	11.787	12.128	11.805	11.873	11.954	12.044	12.010	12.028	12.087	12.160	12.227
Total Energy Use	16.638	16.341	16.614	17.020	16.827	16.991	17.188	17.367	17.385	17.452	17.475	17.585	17.655
Population (millions)	46.474	46.669	46.846	47.014	47.177	47.333	47.483	47.628	47.765	47.895	48.017	48.129	48.233
Carbon Dioxide Emissions (million metric tons)	1074.46	1056.06	1063.66	1086.63	1066.57	1071.79	1082.51	1093.66	1094.23	1097.72	1094.73	1099.26	1094.14

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(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030	
Residential															
Liquefied Petroleum Gases	0.139	0.140	0.142	0.143	0.145	0.146	0.148	0.149	0.150	0.152	0.153	0.154	0.156	1.1%	
Kerosene	0.007	0.007	0.007	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	-0.8%	
Distillate Fuel Oil	0.041	0.041	0.040	0.040	0.040	0.039	0.039	0.039	0.038	0.038	0.037	0.037	0.037	-0.1%	
Liquid Fuels and Other Petroleum Subtotal	0.186	0.187	0.189	0.190	0.191	0.192	0.193	0.194	0.195	0.195	0.197	0.197	0.198	0.7%	
Natural Gas	1.438	1.439	1.445	1.444	1.443	1.444	1.444	1.437	1.434	1.431	1.430	1.421	1.416	0.4%	
Coal	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	-0.2%	
Renewable Energy 1/	0.094	0.093	0.092	0.091	0.090	0.089	0.089	0.088	0.087	0.086	0.086	0.085	0.084	-0.6%	
Electricity	0.664	0.666	0.667	0.668	0.671	0.675	0.682	0.686	0.692	0.698	0.706	0.710	0.715	0.5%	
Delivered Energy	2.384	2.387	2.395	2.394	2.398	2.401	2.410	2.406	2.409	2.412	2.420	2.414	2.415	0.4%	
Electricity Related Losses	1.640	1.631	1.620	1.616	1.627	1.630	1.648	1.654	1.654	1.655	1.667	1.667	1.680	0.4%	
Total	4.024	4.018	4.015	4.009	4.025	4.031	4.058	4.059	4.064	4.067	4.087	4.082	4.095	0.4%	
Commercial															
Liquefied Petroleum Gases	0.020	0.020	0.020	0.020	0.020	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.6%	
Motor Gasoline 2/	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.2%	
Kerosene	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.1%	
Distillate Fuel Oil	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.0%	
Residual Fuel Oil	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	-1.0%	
Liquid Fuels and Other Petroleum Subtotal	0.070	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.072	0.072	0.072	0.072	0.2%	
Natural Gas	0.766	0.771	0.776	0.783	0.788	0.791	0.794	0.798	0.802	0.805	0.808	0.812	0.815	0.8%	
Coal	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.0%	
Renewable Energy 3/	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.027	0.0%	
Electricity	0.757	0.768	0.779	0.790	0.801	0.812	0.823	0.833	0.845	0.856	0.867	0.878	0.888	1.5%	
Delivered Energy	1.646	1.661	1.678	1.696	1.712	1.727	1.741	1.755	1.770	1.785	1.799	1.813	1.827	1.1%	
Electricity Related Losses	1.869	1.880	1.890	1.913	1.942	1.960	1.988	2.010	2.020	2.030	2.048	2.062	2.085	1.4%	
Total	3.516	3.541	3.568	3.609	3.654	3.686	3.729	3.765	3.790	3.815	3.847	3.876	3.912	1.3%	
Industrial 4/															
Liquefied Petroleum Gases	0.081	0.079	0.078	0.077	0.076	0.075	0.074	0.073	0.073	0.072	0.071	0.070	0.070	-1.2%	
Motor Gasoline 2/	0.052	0.052	0.051	0.051	0.051	0.051	0.051	0.051	0.052	0.052	0.051	0.051	0.051	-0.2%	
Distillate Fuel Oil	0.171	0.169	0.167	0.166	0.165	0.164	0.163	0.163	0.163	0.163	0.162	0.162	0.162	-0.4%	
Residual Fuel Oil	0.016	0.016	0.016	0.015	0.015	0.015	0.015	0.015	0.014	0.014	0.014	0.014	0.014	-1.8%	
Petrochemical Feedstocks	0.133	0.131	0.129	0.127	0.125	0.124	0.123	0.121	0.120	0.119	0.118	0.116	0.115	-0.8%	
Other Petroleum 5/	0.596	0.591	0.587	0.586	0.587	0.589	0.586	0.590	0.596	0.601	0.602	0.605	0.612	-0.1%	
Liquid Fuels and Other Petroleum Subtotal	1.049	1.038	1.028	1.023	1.020	1.018	1.012	1.013	1.017	1.021	1.019	1.019	1.024	-0.4%	
Natural Gas	1.164	1.164	1.164	1.173	1.169	1.166	1.154	1.146	1.139	1.132	1.123	1.123	1.110	1.101	-0.1%
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	
Lease and Plant Fuel 6/	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	-2.2%	
Natural Gas Subtotal	1.175	1.176	1.175	1.184	1.181	1.178	1.165	1.157	1.150	1.143	1.134	1.121	1.112	-0.1%	
Metallurgical Coal	0.237	0.235	0.233	0.231	0.229	0.226	0.223	0.220	0.216	0.213	0.209	0.204	0.199	-1.5%	
Other Industrial Coal	0.322	0.321	0.321	0.320	0.320	0.320	0.319	0.318	0.318	0.317	0.316	0.316	0.315	-0.2%	
Coal-to-Liquids Heat and Power	0.035	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-27.0%	
Net Coal Coke Imports	0.154	0.154	0.154	0.155	0.154	0.154	0.153	0.152	0.151	0.149	0.147	0.144	0.142	-3.2%	
Coal Subtotal	0.748	0.717	0.708	0.706	0.703	0.700	0.695	0.690	0.684	0.679	0.672	0.664	0.656	-1.5%	
Biofuels Heat and Coproducts	0.321	0.350	0.367	0.430	0.585	0.579	0.574	0.592	0.611	0.603	0.623	0.611	0.624	9.9%	
Renewable Energy 7/	0.155	0.156	0.158	0.159	0.160	0.161	0.162	0.164	0.165	0.166	0.167	0.168	0.169	0.8%	
Electricity	0.776	0.774	0.771	0.770	0.765	0.761	0.757	0.754	0.752	0.748	0.744	0.738	0.734	0.1%	
Delivered Energy	4.224	4.211	4.208	4.271	4.413	4.397	4.365	4.370	4.379	4.360	4.358	4.321	4.318	0.2%	
Electricity Related Losses	1.915	1.894	1.872	1.863	1.853	1.837	1.829	1.818	1.797	1.774	1.757	1.735	1.724	0.0%	
Total	6.139	6.105	6.079	6.134	6.267	6.234	6.194	6.188	6.177	6.135	6.115	6.056	6.042	0.1%	

Table 3. Energy Consumption by Sector and Source
(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
Transportation														
Liquefied Petroleum Gases	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	-0.5%
E85 8/	0.264	0.274	0.297	0.315	0.330	0.340	0.343	0.357	0.361	0.367	0.371	0.372	0.378	34.3%
Motor Gasoline 2/	2.203	2.167	2.115	2.075	2.038	2.007	1.984	1.952	1.933	1.914	1.897	1.885	1.870	-1.4%
Jet Fuel 9/	0.329	0.333	0.337	0.342	0.346	0.350	0.353	0.357	0.361	0.365	0.368	0.372	0.375	1.5%
Distillate Fuel Oil 10/	1.080	1.091	1.103	1.116	1.128	1.141	1.155	1.169	1.184	1.199	1.215	1.230	1.246	1.2%
Residual Fuel Oil	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	-0.3%
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43.8%
Other Petroleum 11/	0.024	0.024	0.024	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	-0.3%
Liquid Fuels and Other Petroleum Subtotal	3.906	3.895	3.882	3.876	3.871	3.867	3.865	3.866	3.868	3.874	3.880	3.888	3.899	0.0%
Pipeline Fuel Natural Gas	0.062	0.061	0.061	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	-0.1%
Compressed Natural Gas	0.007	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.009	4.9%
Electricity	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.7%
Delivered Energy	3.977	3.966	3.954	3.949	3.944	3.940	3.939	3.939	3.942	3.947	3.954	3.961	3.973	0.1%
Electricity Related Losses	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.6%
Total	3.984	3.972	3.960	3.955	3.950	3.947	3.945	3.946	3.948	3.954	3.961	3.968	3.980	0.1%
Delivered Energy Consumption, All Sectors														
Liquefied Petroleum Gases	0.242	0.242	0.243	0.243	0.244	0.244	0.246	0.246	0.246	0.247	0.248	0.248	0.249	0.2%
E85 8/	0.264	0.274	0.297	0.315	0.330	0.340	0.343	0.357	0.361	0.367	0.371	0.372	0.378	34.3%
Motor Gasoline 2/	2.263	2.226	2.174	2.134	2.097	2.066	2.043	2.012	1.993	1.973	1.956	1.945	1.930	-1.4%
Jet Fuel 9/	0.329	0.333	0.337	0.342	0.346	0.350	0.353	0.357	0.361	0.365	0.368	0.372	0.375	1.5%
Kerosene	0.011	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.009	-0.5%
Distillate Fuel Oil	1.330	1.339	1.349	1.360	1.371	1.383	1.395	1.409	1.423	1.438	1.452	1.466	1.482	0.9%
Residual Fuel Oil	0.022	0.022	0.021	0.021	0.021	0.021	0.020	0.020	0.020	0.020	0.020	0.020	0.019	-1.5%
Petrochemical Feedstocks	0.133	0.131	0.129	0.127	0.125	0.124	0.123	0.121	0.120	0.119	0.118	0.116	0.115	-0.8%
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43.8%
Other Petroleum 12/	0.618	0.613	0.609	0.608	0.608	0.611	0.608	0.611	0.617	0.623	0.624	0.627	0.634	-0.1%
Liquid Fuels and Other Petroleum Subtotal	5.212	5.190	5.170	5.160	5.152	5.149	5.142	5.144	5.151	5.161	5.167	5.175	5.192	0.0%
Natural Gas	3.376	3.381	3.392	3.407	3.409	3.408	3.401	3.389	3.384	3.377	3.371	3.352	3.341	0.3%
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--
Lease and Plant Fuel 6/	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	-2.2%
Pipeline Natural Gas	0.062	0.061	0.061	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	-0.1%
Natural Gas Subtotal	3.449	3.454	3.465	3.480	3.483	3.482	3.474	3.462	3.457	3.450	3.444	3.425	3.414	0.3%
Metallurgical Coal	0.237	0.235	0.233	0.231	0.229	0.226	0.223	0.220	0.216	0.213	0.209	0.204	0.199	-1.5%
Other Coal	0.348	0.348	0.347	0.347	0.347	0.346	0.345	0.345	0.344	0.344	0.343	0.342	0.342	-0.2%
Coal-to-Liquids Heat and Power	0.035	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-27.0%
Net Coal Coke Imports	0.154	0.154	0.154	0.155	0.154	0.154	0.153	0.152	0.151	0.149	0.147	0.144	0.142	-3.2%
Coal Subtotal	0.774	0.744	0.735	0.733	0.730	0.726	0.721	0.717	0.711	0.706	0.699	0.691	0.683	-1.4%
Biofuels Heat and Coproducts	0.321	0.350	0.367	0.430	0.585	0.579	0.574	0.592	0.611	0.603	0.623	0.611	0.624	9.9%
Renewable Energy 13/	0.276	0.276	0.277	0.277	0.278	0.278	0.279	0.279	0.279	0.280	0.280	0.279	0.280	0.2%
Electricity	2.199	2.211	2.220	2.230	2.240	2.251	2.264	2.276	2.291	2.305	2.319	2.329	2.340	0.7%
Delivered Energy	12.232	12.225	12.234	12.310	12.467	12.465	12.453	12.469	12.501	12.505	12.531	12.510	12.533	0.3%
Electricity Related Losses	5.430	5.411	5.388	5.398	5.428	5.433	5.472	5.489	5.479	5.466	5.478	5.472	5.495	0.7%
Total	17.662	17.636	17.622	17.707	17.896	17.898	17.926	17.958	17.979	17.971	18.009	17.981	18.028	0.4%

Table 3. Energy Consumption by Sector and Source
(quadrillion Btu, unless otherwise noted)-East North Central - 03

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2006-2030
Electric Power 14/														
Distillate Fuel Oil	0.028	0.028	0.029	0.029	0.029	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.029	-0.2%
Residual Fuel Oil	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-55.2%
Liquid Fuels and Other Petroleum Subtotal	0.028	0.028	0.029	0.029	0.029	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.029	-0.2%
Natural Gas	0.447	0.397	0.402	0.406	0.420	0.407	0.420	0.422	0.433	0.442	0.452	0.455	0.490	2.7%
Steam Coal	5.112	5.125	5.086	5.089	5.117	5.116	5.133	5.138	5.130	5.121	5.136	5.135	5.225	0.4%
Nuclear Power	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.510	-0.2%
Renewable Energy 15/	0.453	0.483	0.501	0.513	0.511	0.542	0.565	0.586	0.587	0.588	0.590	0.592	0.575	7.7%
Electricity Imports	-0.004	-0.005	-0.004	-0.004	-0.004	-0.004	-0.005	-0.004	-0.004	-0.004	-0.004	-0.006	-0.006	1.0%
Total 16/	7.629	7.622	7.608	7.628	7.668	7.684	7.736	7.764	7.769	7.771	7.797	7.800	7.835	0.7%
Total Energy Consumption														
Liquefied Petroleum Gases	0.242	0.242	0.243	0.243	0.244	0.244	0.246	0.246	0.246	0.247	0.248	0.248	0.249	0.2%
E85 8/	0.264	0.274	0.297	0.315	0.330	0.340	0.343	0.357	0.361	0.367	0.371	0.372	0.378	34.3%
Motor Gasoline 2/	2.263	2.226	2.174	2.134	2.097	2.066	2.043	2.012	1.993	1.973	1.956	1.945	1.930	-1.4%
Jet Fuel 9/	0.329	0.333	0.337	0.342	0.346	0.350	0.353	0.357	0.361	0.365	0.368	0.372	0.375	1.5%
Kerosene	0.011	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.009	-0.5%
Distillate Fuel Oil	1.358	1.366	1.378	1.390	1.400	1.412	1.425	1.438	1.453	1.468	1.482	1.496	1.511	0.9%
Residual Fuel Oil	0.022	0.022	0.021	0.021	0.021	0.021	0.020	0.020	0.020	0.020	0.020	0.020	0.019	-1.6%
Petrochemical Feedstocks	0.133	0.131	0.129	0.127	0.125	0.124	0.123	0.121	0.120	0.119	0.118	0.116	0.115	-0.8%
Liquid Hydrogen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43.8%
Other Petroleum 12/	0.618	0.613	0.609	0.608	0.608	0.611	0.608	0.611	0.617	0.623	0.624	0.627	0.634	-0.1%
Liquid Fuels and Other Petroleum Subtotal	5.240	5.218	5.199	5.189	5.182	5.178	5.171	5.174	5.181	5.191	5.197	5.205	5.221	0.0%
Natural Gas	3.822	3.778	3.794	3.813	3.829	3.816	3.820	3.810	3.817	3.819	3.822	3.807	3.831	0.6%
Natural-Gas-to-Liquids Heat and Power	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--
Lease and Plant Fuel 6/	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	-2.2%
Pipeline Natural Gas	0.062	0.061	0.061	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	-0.1%
Natural Gas Subtotal	3.896	3.851	3.867	3.886	3.903	3.889	3.894	3.884	3.890	3.892	3.896	3.880	3.904	0.6%
Metallurgical Coal	0.237	0.235	0.233	0.231	0.229	0.226	0.223	0.220	0.216	0.213	0.209	0.204	0.199	-1.5%
Other Coal	5.460	5.473	5.434	5.436	5.464	5.462	5.478	5.483	5.475	5.465	5.479	5.477	5.566	0.4%
Coal-to-Liquids Heat and Power	0.035	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-27.0%
Net Coal Coke Imports	0.154	0.154	0.154	0.155	0.154	0.154	0.153	0.152	0.151	0.149	0.147	0.144	0.142	-3.2%
Coal Subtotal	5.886	5.869	5.821	5.822	5.847	5.842	5.854	5.855	5.842	5.827	5.835	5.826	5.907	0.2%
Nuclear Power	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.581	1.510	-0.2%
Biofuels Heat and Coproducts	0.321	0.350	0.367	0.430	0.585	0.579	0.574	0.592	0.611	0.603	0.623	0.611	0.624	9.9%
Renewable Energy 17/	0.729	0.759	0.778	0.791	0.789	0.820	0.843	0.865	0.866	0.868	0.870	0.872	0.855	3.7%
Electricity Imports	-0.004	-0.005	-0.004	-0.004	-0.004	-0.004	-0.005	-0.004	-0.004	-0.004	-0.004	-0.006	-0.006	1.0%
Total	17.662	17.636	17.622	17.707	17.896	17.898	17.926	17.958	17.979	17.971	18.009	17.981	18.028	0.4%
Energy Use & Related Statistics														
Delivered Energy Use	12.232	12.225	12.234	12.310	12.467	12.465	12.453	12.469	12.501	12.505	12.531	12.510	12.533	0.3%
Total Energy Use	17.662	17.636	17.622	17.707	17.896	17.898	17.926	17.958	17.979	17.971	18.009	17.981	18.028	0.4%
Population (millions)	48.327	48.411	48.486	48.552	48.611	48.662	48.706	48.743	48.778	48.812	48.845	48.876	48.906	0.2%
Carbon Dioxide Emissions (million metric tons)	1087.88	1082.68	1076.99	1076.29	1079.00	1077.57	1078.84	1077.99	1077.59	1076.96	1078.17	1076.85	1086.94	0.1%

Table 3. Energy Consumption by Sector and Source
(quadrillion Btu, unless otherwise noted)-East North Central - 03

1/ Includes wood used for residential heating. See Table 4 and/or Table 17 for estimates of nonmarketed renewable energy consumption for geothermal heat pumps, solar thermal hot water heating, and solar photovoltaic electricity generation.

2/ Includes ethanol (blends of 10 percent or less) and ethers blended into gasoline.

3/ Includes commercial sector consumption of wood and wood waste, landfill gas, municipal solid waste, and other biomass for combined heat and power.

4/ Includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

5/ Includes petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.

6/ Represents natural gas used in well, field, and lease operations, and in natural gas processing plant machinery.

7/ Includes consumption of energy produced from hydroelectric, wood and wood waste, municipal solid waste, and other biomass sources.

8/ E85 refers to a blend of 85 percent ethanol (renewable) and 15 percent motor gasoline (nonrenewable). To address cold starting issues, the percentage of ethanol varies seasonally. The annual average ethanol content of 74 percent is used for this forecast.

9/ Includes only kerosene type.

10/ Diesel fuel for on- and off- road use.

11/ Includes aviation gasoline and lubricants.

12/ Includes unfinished oils, natural gasoline, motor gasoline blending components, aviation gasoline, lubricants, still gas, asphalt, road oil, petroleum coke, and miscellaneous petroleum products.

13/ Includes electricity generated for sale to the grid and for own use from renewable sources, and non-electric energy from renewable sources. Excludes nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

14/ Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

15/ Includes conventional hydroelectric, geothermal, wood and wood waste, biogenic municipal solid waste, other biomass, petroleum coke, wind, photovoltaic and solar thermal sources. Excludes net electricity imports.

16/ Includes non-biogenic municipal waste not included above.

17/ Includes hydroelectric, geothermal, wood and wood waste, biogenic municipal solid waste, other biomass, wind, photovoltaic and solar thermal sources. Includes ethanol components of E85; excludes ethanol blends (10 percent or less) in motor gasoline. Excludes net electricity imports and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

Btu = British thermal unit.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2005 and 2006 are model results and may differ slightly from official EIA data reports. Consumption values of 0.00 are values that round to 0.00, because they are less than 0.005.

Sources: 2005 and 2006 consumption based on: Energy Information Administration (EIA), Annual Energy Review 2006, DOE/EIA-0384(2006) (Washington, DC, June 2007). 2005 and 2006 population and gross domestic product: Global Insight, Global Insight Industry and Employment models, July 2007. 2005 and 2006 carbon dioxide emissions: EIA, Emissions of Greenhouse Gases in the United States 2006, DOE/EIA-0573(2006) (Washington, DC, December 2007). Projections: EIA, AEO2008 National Energy Modeling System run aeo2008.d030208f.