

Table F1. Total world delivered energy consumption by end-use sector and fuel, 2011–40
(quadrillion Btu)

Sector/fuel	History		Projections					Average annual percent change, 2012–40
	2011	2012	2020	2025	2030	2035	2040	
Residential								
Liquids	9.1	9.2	10.0	9.8	9.5	9.3	9.0	-0.1
Natural gas	19.9	19.4	22.8	24.6	26.2	27.4	28.1	1.3
Coal	4.7	4.8	4.5	4.3	4.1	4.1	4.0	-0.6
Electricity	18.0	18.4	22.5	25.5	28.6	32.0	35.8	2.4
Renewables	0.7	1.3	1.3	1.3	1.3	1.3	1.4	0.3
Total	52.4	53.0	61.1	65.4	69.8	74.1	78.3	1.4
Commercial								
Liquids	3.9	3.9	4.4	4.4	4.5	4.5	4.5	0.5
Natural gas	8.6	8.4	9.8	10.3	10.8	11.0	10.9	0.9
Coal	1.2	1.5	1.5	1.5	1.5	1.5	1.6	0.2
Electricity	15.2	15.4	18.6	20.8	23.1	25.6	28.1	2.2
Renewables	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
Total	29.0	29.3	34.5	37.2	40.0	42.7	45.2	1.6
Industrial								
Liquids	65.3	66.5	72.2	76.5	80.6	84.6	88.6	1.0
Natural gas	49.1	50.7	56.2	62.0	68.0	74.5	80.4	1.7
Coal	54.5	55.7	62.0	64.3	66.0	67.5	68.7	0.7
Electricity	31.5	31.9	37.2	40.0	42.2	44.3	46.3	1.3
Renewables	16.6	17.4	18.2	19.7	21.3	23.0	25.1	1.3
Total	217.0	222.3	245.8	262.6	278.0	294.0	309.1	1.2
Transportation								
Liquids	99.0	100.3	110.0	115.3	121.0	128.4	136.8	1.1
Natural gas	3.3	3.3	5.0	6.6	9.3	12.3	16.1	5.8
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
Electricity	0.6	0.6	0.8	1.0	1.2	1.5	2.0	4.4
Total	102.8	104.2	115.8	122.9	131.6	142.2	154.8	1.4
All end-use sectors								
Liquids	177.3	180.0	196.3	205.7	215.3	226.3	238.5	1.0
Natural gas	80.9	81.8	93.9	103.6	114.3	125.3	135.4	1.8
Coal	60.4	62.0	68.0	70.1	71.6	73.1	74.3	0.6
Electricity	65.2	66.3	79.1	87.3	95.1	103.4	112.2	1.9
Renewables	17.4	18.8	19.7	21.2	22.7	24.5	26.6	1.2
Delivered energy	401.3	408.9	456.9	487.8	519.1	552.7	587.0	1.3
Electricity-related losses	139.3	140.4	172.1	186.1	198.7	212.9	227.9	1.7
Total	540.5	549.3	628.9	673.9	717.7	765.6	815.0	1.4
Electric power^a								
Liquids	7.8	8.4	7.3	6.1	5.5	5.2	5.0	-1.8
Natural gas	40.0	41.8	44.4	51.3	58.8	67.3	76.0	2.2
Coal	91.4	91.1	100.7	103.0	102.8	103.9	105.9	0.5
Nuclear	26.2	24.5	30.9	34.6	40.2	43.4	46.0	2.3
Renewables	43.0	45.0	67.3	77.6	85.4	94.9	104.8	3.1
Total	208.4	210.7	250.6	272.6	292.7	314.7	337.7	1.7
Unspecified sector	-3.4	-3.6	0.3	0.4	0.7	1.3	2.1	—
Total energy consumption								
Liquids	180.3	183.6	204.2	212.5	221.8	233.2	246.0	1.1
Natural gas	121.6	124.2	138.3	154.8	173.1	192.5	211.4	1.9
Coal	152.0	153.3	168.6	173.2	174.4	176.9	180.2	0.6
Nuclear	26.2	24.5	30.9	34.6	40.2	43.4	46.0	2.3
Renewables	60.4	63.8	87.0	98.8	108.1	119.5	131.4	2.6
Total	540.5	549.3	628.9	673.9	717.7	765.6	815.0	1.4

^aFuel inputs used in the production of electricity and heat, excluding captive generators.

Sources: **History:** Derived from U.S. Energy Information Administration (EIA), International Energy Statistics database (as of May 2015), www.eia.gov/ies; and International Energy Agency, "Balances of OECD and Non-OECD Statistics" (2014), www.iea.org (subscription site). **Projections:** EIA, *Annual Energy Outlook 2015*, DOE/EIA-0383(2015) (Washington, DC: April 2015); AEO2015 National Energy Modeling System, run REF2015, D021915A, www.eia.gov/aeo; and World Energy Projection System Plus (2016), run IEO2016-reference_final_2016.02.19_115008.