

## Reference case

**Table A1. Total energy supply, disposition, and price summary**  
(quadrillion Btu per year, unless otherwise noted)

Supply, disposition, and prices	Reference case							Annual growth 2010-2035 (percent)
	2009	2010	2015	2020	2025	2030	2035	
<b>Production</b>								
Crude oil and lease condensate .....	11.35	11.59	13.23	14.40	13.77	13.71	12.89	0.4%
Natural gas plant liquids .....	2.57	2.78	3.33	3.79	3.93	3.98	3.94	1.4%
Dry natural gas .....	21.09	22.10	24.22	25.69	26.91	27.58	28.60	1.0%
Coal <sup>1</sup> .....	21.63	22.06	20.24	20.74	22.25	23.22	24.14	0.4%
Nuclear / uranium <sup>2</sup> .....	8.36	8.44	8.68	9.28	9.60	9.56	9.28	0.4%
Hydropower .....	2.67	2.51	2.90	2.95	2.99	3.02	3.04	0.8%
Biomass <sup>3</sup> .....	3.72	4.05	4.45	5.26	6.26	7.60	9.07	3.3%
Other renewable energy <sup>4</sup> .....	1.11	1.34	1.99	2.04	2.22	2.41	2.81	3.0%
Other <sup>5</sup> .....	0.47	0.64	0.60	0.64	0.69	0.79	0.91	1.4%
<b>Total .....</b>	<b>72.97</b>	<b>75.50</b>	<b>79.64</b>	<b>84.80</b>	<b>88.61</b>	<b>91.87</b>	<b>94.67</b>	<b>0.9%</b>
<b>Imports</b>								
Crude oil .....	19.70	20.14	18.87	16.00	16.23	16.04	16.90	-0.7%
Liquid fuels and other petroleum <sup>6</sup> .....	5.40	5.02	4.32	4.03	4.08	4.04	4.14	-0.8%
Natural gas <sup>7</sup> .....	3.85	3.81	3.73	3.49	2.75	3.00	2.84	-1.2%
Other imports <sup>8</sup> .....	0.61	0.52	0.44	0.72	1.07	0.78	0.81	1.8%
<b>Total .....</b>	<b>29.56</b>	<b>29.49</b>	<b>27.37</b>	<b>24.25</b>	<b>24.14</b>	<b>23.86</b>	<b>24.69</b>	<b>-0.7%</b>
<b>Exports</b>								
Liquid fuels and other petroleum <sup>9</sup> .....	4.20	4.81	5.00	4.39	4.46	4.67	4.95	0.1%
Natural gas <sup>10</sup> .....	1.08	1.15	1.93	3.09	3.51	3.86	4.17	5.3%
Coal .....	1.51	2.10	2.73	2.36	2.82	2.85	3.13	1.6%
<b>Total .....</b>	<b>6.79</b>	<b>8.06</b>	<b>9.66</b>	<b>9.84</b>	<b>10.79</b>	<b>11.38</b>	<b>12.25</b>	<b>1.7%</b>
<b>Discrepancy<sup>11</sup> .....</b>	<b>1.04</b>	<b>-1.23</b>	<b>-0.08</b>	<b>-0.10</b>	<b>-0.03</b>	<b>0.04</b>	<b>0.18</b>	<b>--</b>
<b>Consumption</b>								
Liquid fuels and other petroleum <sup>12</sup> .....	36.50	37.25	36.72	36.38	36.58	36.99	37.70	0.0%
Natural gas .....	23.43	24.71	26.00	26.07	26.14	26.72	27.26	0.4%
Coal <sup>13</sup> .....	19.62	20.76	17.80	18.73	20.02	20.59	21.15	0.1%
Nuclear / uranium <sup>2</sup> .....	8.36	8.44	8.68	9.28	9.60	9.56	9.28	0.4%
Hydropower .....	2.67	2.51	2.90	2.95	2.99	3.02	3.04	0.8%
Biomass <sup>14</sup> .....	2.72	2.88	3.04	3.58	4.17	4.78	5.44	2.6%
Other renewable energy <sup>4</sup> .....	1.11	1.34	1.99	2.04	2.22	2.41	2.81	3.0%
Other <sup>15</sup> .....	0.32	0.29	0.30	0.29	0.28	0.25	0.24	-0.6%
<b>Total .....</b>	<b>94.71</b>	<b>98.16</b>	<b>97.43</b>	<b>99.32</b>	<b>101.99</b>	<b>104.32</b>	<b>106.93</b>	<b>0.3%</b>
<b>Prices (2010 dollars per unit)</b>								
<b>Petroleum (dollars per barrel)</b>								
Low sulfur light crude oil .....	62.37	79.39	116.91	126.68	132.56	138.49	144.98	2.4%
Imported crude oil <sup>16</sup> .....	59.72	75.87	113.97	115.74	121.21	126.51	132.95	2.3%
<b>Natural gas (dollars per million Btu)</b>								
at Henry hub .....	4.00	4.39	4.29	4.58	5.63	6.29	7.37	2.1%
at the wellhead <sup>17</sup> .....	3.75	4.06	3.84	4.10	5.00	5.56	6.48	1.9%
<b>Natural gas (dollars per thousand cubic feet)</b>								
at the wellhead <sup>17</sup> .....	3.85	4.16	3.94	4.19	5.12	5.69	6.64	1.9%
<b>Coal (dollars per ton)</b>								
at the minemouth <sup>18</sup> .....	33.62	35.61	42.08	40.96	44.05	47.28	50.52	1.4%
<b>Coal (dollars per million Btu)</b>								
at the minemouth <sup>18</sup> .....	1.68	1.76	2.08	2.06	2.23	2.39	2.56	1.5%
Average end-use <sup>19</sup> .....	2.32	2.38	2.56	2.58	2.70	2.81	2.94	0.9%
Average electricity (cents per kilowatthour) .....	9.9	9.8	9.7	9.6	9.7	9.8	10.1	0.1%

**Table A1. Total energy supply, disposition, and price summary (continued)**  
(quadrillion Btu per year, unless otherwise noted)

Supply, disposition, and prices	Reference case							Annual growth 2010-2035 (percent)
	2009	2010	2015	2020	2025	2030	2035	
<b>Prices (nominal dollars per unit)</b>								
Petroleum (dollars per barrel)								
Low sulfur light crude oil	61.65	79.39	125.97	148.87	170.09	197.10	229.55	4.3%
Imported crude oil <sup>16</sup>	59.04	75.87	122.81	136.02	155.52	180.06	210.51	4.2%
Natural gas (dollars per million Btu)								
at Henry hub	3.95	4.39	4.62	5.39	7.23	8.95	11.67	4.0%
at the wellhead <sup>17</sup>	3.71	4.06	4.14	4.81	6.42	7.92	10.26	3.8%
Natural gas (dollars per thousand cubic feet)								
at the wellhead <sup>17</sup>	3.80	4.16	4.24	4.93	6.57	8.11	10.51	3.8%
Coal (dollars per ton)								
at the minemouth <sup>18</sup>	33.24	35.61	45.34	48.13	56.52	67.28	80.00	3.3%
Coal (dollars per million Btu)								
at the minemouth <sup>18</sup>	1.66	1.76	2.24	2.42	2.86	3.41	4.05	3.4%
Average end-use <sup>19</sup>	2.30	2.38	2.76	3.03	3.47	4.01	4.66	2.7%
Average electricity (cents per kilowatthour)	9.8	9.8	10.4	11.3	12.5	13.9	16.0	2.0%

<sup>1</sup>Includes waste coal.

<sup>2</sup>These values represent the energy obtained from uranium when it is used in light water reactors. The total energy content of uranium is much larger, but alternative processes are required to take advantage of it.

<sup>3</sup>Includes grid-connected electricity from wood and wood waste; biomass, such as corn, used for liquid fuels production; and non-electric energy demand from wood. Refer to Table A17 for details.

<sup>4</sup>Includes grid-connected electricity from landfill gas; biogenic municipal waste; wind; photovoltaic and solar thermal sources; and non-electric energy from renewable sources, such as active and passive solar systems. Excludes electricity imports using renewable sources and nonmarketed renewable energy. See Table A17 for selected nonmarketed residential and commercial renewable energy data.

<sup>5</sup>Includes non-biogenic municipal waste, liquid hydrogen, methanol, and some domestic inputs to refineries.

<sup>6</sup>Includes imports of finished petroleum products, unfinished oils, alcohols, ethers, blending components, and renewable fuels such as ethanol.

<sup>7</sup>Includes imports of liquefied natural gas that is later re-exported.

<sup>8</sup>Includes coal, coal coke (net), and electricity (net). Excludes imports of fuel used in nuclear power plants.

<sup>9</sup>Includes crude oil, petroleum products, ethanol, and biodiesel.

<sup>10</sup>Includes re-exported liquefied natural gas.

<sup>11</sup>Balancing item. Includes unaccounted for supply, losses, gains, and net storage withdrawals.

<sup>12</sup>Includes petroleum-derived fuels and non-petroleum derived fuels, such as ethanol and biodiesel, and coal-based synthetic liquids. Petroleum coke, which is a solid, is included. Also included are natural gas plant liquids and crude oil consumed as a fuel. Refer to Table A17 for detailed renewable liquid fuels consumption.

<sup>13</sup>Excludes coal converted to coal-based synthetic liquids and natural gas.

<sup>14</sup>Includes grid-connected electricity from wood and wood waste, non-electric energy from wood, and biofuels heat and coproducts used in the production of liquid fuels, but excludes the energy content of the liquid fuels.

<sup>15</sup>Includes non-biogenic municipal waste, liquid hydrogen, and net electricity imports.

<sup>16</sup>Weighted average price delivered to U.S. refiners.

<sup>17</sup>Represents lower 48 onshore and offshore supplies.

<sup>18</sup>Includes reported prices for both open market and captive mines.

<sup>19</sup>Prices weighted by consumption; weighted average excludes residential and commercial prices, and export free-alongside-ship (f.a.s.) prices.

Btu = British thermal unit.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2009 and 2010 are model results and may differ slightly from official EIA data reports.

**Sources:** 2009 natural gas supply values: U.S. Energy Information Administration (EIA), *Natural Gas Annual 2009*, DOE/EIA-0131(2009) (Washington, DC, December 2010). 2010 natural gas supply values and natural gas wellhead price: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2011/07) (Washington, DC, July 2011). 2009 natural gas wellhead price: U.S. Department of the Interior, Office of Natural Resources Revenue; and EIA, *Natural Gas Annual 2009*, DOE/EIA-0131(2009) (Washington, DC, December 2010). 2009 and 2010 coal minemouth and delivered coal prices: EIA, *Annual Coal Report 2010*, DOE/EIA-0584(2010) (Washington, DC, November 2011). 2010 petroleum supply values and 2009 crude oil and lease condensate production: EIA, *Petroleum Supply Annual 2010*, DOE/EIA-0340(2010)/1 (Washington, DC, July 2011). Other 2009 petroleum supply values: EIA, *Petroleum Supply Annual 2009*, DOE/EIA-0340(2009)/1 (Washington, DC, July 2010). 2009 and 2010 low sulfur light crude oil price: EIA, Form EIA-856, "Monthly Foreign Crude Oil Acquisition Report." Other 2009 and 2010 coal values: *Quarterly Coal Report, October-December 2010*, DOE/EIA-0121(2010/4Q) (Washington, DC, May 2011). Other 2009 and 2010 values: EIA, *Annual Energy Review 2010*, DOE/EIA-0384(2010) (Washington, DC, October 2011). **Projections:** EIA, AEO2012 National Energy Modeling System run REF2012.D020112C.