

# Annual Energy Outlook 2014

with projections to 2040



*Independent Statistics & Analysis*

U.S. Energy Information  
Administration

**Table A12. Petroleum and other liquids prices**  
(2012 dollars per gallon, unless otherwise noted)

Sector and fuel	Reference case							Annual growth 2012-2040 (percent)
	2011	2012	2020	2025	2030	2035	2040	
Crude oil prices (2012 dollars per barrel)								
Brent spot .....	113.24	111.65	96.57	108.99	118.99	129.77	141.46	0.8%
West Texas Intermediate spot .....	96.55	94.12	94.57	106.99	116.99	127.77	139.46	1.4%
Average imported refiners acquisition cost <sup>1</sup> .....	104.47	101.10	88.07	100.01	109.22	119.80	130.80	0.9%
Delivered sector product prices								
Residential								
Propane .....	2.31	2.20	2.17	2.27	2.35	2.45	2.52	0.5%
Distillate fuel oil .....	3.73	3.79	3.42	3.74	3.97	4.24	4.53	0.6%
Commercial								
Distillate fuel oil .....	3.64	3.70	3.00	3.31	3.54	3.82	4.10	0.4%
Residual fuel oil .....	2.91	3.42	2.16	2.41	2.68	2.90	3.14	-0.3%
Residual fuel oil (2012 dollars per barrel) .....	122.01	143.59	90.53	101.42	112.66	121.75	131.97	-0.3%
Industrial <sup>2</sup>								
Propane .....	2.07	1.93	1.89	2.02	2.13	2.26	2.36	0.7%
Distillate fuel oil .....	3.71	3.76	3.05	3.36	3.58	3.84	4.11	0.3%
Residual fuel oil .....	2.87	3.13	2.23	2.49	2.74	2.96	3.22	0.1%
Residual fuel oil (2012 dollars per barrel) .....	120.55	131.40	93.56	104.67	115.00	124.42	135.04	0.1%
Transportation								
Propane .....	2.40	2.30	2.27	2.37	2.45	2.56	2.63	0.5%
Ethanol (E85) <sup>3</sup> .....	4.19	3.33	2.43	2.62	2.65	2.92	3.37	0.0%
Ethanol wholesale price .....	2.58	2.58	2.66	2.61	2.52	2.43	2.65	0.1%
Motor gasoline <sup>4</sup> .....	3.65	3.69	3.08	3.29	3.43	3.65	3.90	0.2%
Jet fuel <sup>5</sup> .....	3.11	3.10	2.63	2.96	3.20	3.49	3.79	0.7%
Diesel fuel (distillate fuel oil) <sup>6</sup> .....	3.89	3.95	3.67	3.98	4.20	4.47	4.73	0.7%
Residual fuel oil .....	2.70	3.00	1.86	2.12	2.32	2.54	2.78	-0.3%
Residual fuel oil (2012 dollars per barrel) .....	113.46	126.17	78.31	89.03	97.43	106.50	116.65	-0.3%
Electric power <sup>7</sup>								
Distillate fuel oil .....	3.30	3.35	2.87	3.18	3.42	3.70	4.00	0.6%
Residual fuel oil .....	2.39	3.10	2.07	2.33	2.57	2.81	3.06	0.0%
Residual fuel oil (2012 dollars per barrel) .....	100.25	130.00	87.12	98.04	107.77	117.85	128.40	0.0%
Average prices, all sectors <sup>8</sup>								
Propane .....	2.23	2.12	2.06	2.16	2.25	2.36	2.45	0.5%
Motor gasoline <sup>4</sup> .....	3.63	3.66	3.08	3.29	3.43	3.65	3.90	0.2%
Jet fuel <sup>5</sup> .....	3.11	3.10	2.63	2.96	3.20	3.49	3.79	0.7%
Distillate fuel oil .....	3.83	3.89	3.53	3.84	4.07	4.33	4.60	0.6%
Residual fuel oil .....	2.66	3.05	1.97	2.23	2.44	2.66	2.91	-0.2%
Residual fuel oil (2012 dollars per barrel) .....	111.89	128.30	82.69	93.53	102.60	111.83	122.12	-0.2%
Average .....	3.28	3.28	2.80	3.02	3.19	3.43	3.69	0.4%

**Table A12. Petroleum and other liquids prices (continued)**  
(nominal dollars per gallon, unless otherwise noted)

Sector and fuel	Reference case							Annual growth 2012-2040 (percent)
	2011	2012	2020	2025	2030	2035	2040	
<b>Crude oil spot prices</b>								
<b>(nominal dollars per barrel)</b>								
Brent spot .....	111.26	111.65	109.37	134.25	160.19	193.27	234.53	2.7%
West Texas Intermediate spot .....	94.86	94.12	107.11	131.78	157.49	190.30	231.22	3.3%
Average imported refiners acquisition cost <sup>1</sup> .....	102.64	101.10	99.75	123.19	147.02	178.43	216.87	2.8%
<b>Delivered sector product prices</b>								
<b>Residential</b>								
Propane .....	2.27	2.20	2.46	2.80	3.17	3.65	4.19	2.3%
Distillate fuel oil .....	3.67	3.79	3.88	4.60	5.34	6.31	7.51	2.5%
<b>Commercial</b>								
Distillate fuel oil .....	3.58	3.70	3.40	4.08	4.76	5.69	6.79	2.2%
Residual fuel oil .....	2.85	3.42	2.44	2.97	3.61	4.32	5.21	1.5%
Residual fuel oil (nominal dollars per barrel).....	119.88	143.59	102.54	124.92	151.65	181.33	218.81	1.5%
<b>Industrial<sup>2</sup></b>								
Propane .....	2.03	1.93	2.14	2.48	2.86	3.36	3.91	2.6%
Distillate fuel oil .....	3.65	3.76	3.46	4.13	4.82	5.72	6.81	2.1%
Residual fuel oil .....	2.82	3.13	2.52	3.07	3.69	4.41	5.33	1.9%
Residual fuel oil (nominal dollars per barrel).....	118.44	131.40	105.96	128.93	154.81	185.30	223.89	1.9%
<b>Transportation</b>								
Propane .....	2.36	2.30	2.57	2.92	3.30	3.81	4.36	2.3%
Ethanol (E85) <sup>3</sup> .....	4.11	3.33	2.76	3.22	3.57	4.34	5.59	1.9%
Ethanol wholesale price .....	2.54	2.58	3.02	3.21	3.39	3.63	4.39	1.9%
Motor gasoline <sup>4</sup> .....	3.58	3.69	3.49	4.05	4.61	5.43	6.47	2.0%
Jet fuel <sup>5</sup> .....	3.05	3.10	2.98	3.65	4.31	5.19	6.28	2.5%
Diesel fuel (distillate fuel oil) <sup>6</sup> .....	3.82	3.95	4.16	4.90	5.66	6.65	7.84	2.5%
Residual fuel oil .....	2.65	3.00	2.11	2.61	3.12	3.78	4.60	1.5%
Residual fuel oil (nominal dollars per barrel).....	111.48	126.17	88.69	109.66	131.15	158.62	193.40	1.5%
<b>Electric power<sup>7</sup></b>								
Distillate fuel oil .....	3.24	3.35	3.25	3.92	4.60	5.51	6.62	2.5%
Residual fuel oil .....	2.35	3.10	2.35	2.88	3.45	4.18	5.07	1.8%
Residual fuel oil (nominal dollars per barrel).....	98.49	130.00	98.67	120.77	145.08	175.52	212.89	1.8%
<b>Average prices, all sectors<sup>8</sup></b>								
Propane .....	2.19	2.12	2.33	2.66	3.03	3.52	4.06	2.3%
Motor gasoline <sup>4</sup> .....	3.57	3.66	3.49	4.05	4.61	5.43	6.47	2.1%
Jet fuel <sup>5</sup> .....	3.05	3.10	2.98	3.65	4.31	5.19	6.28	2.5%
Distillate fuel oil .....	3.77	3.89	3.99	4.73	5.48	6.45	7.63	2.4%
Residual fuel oil .....	2.62	3.05	2.23	2.74	3.29	3.97	4.82	1.6%
Residual fuel oil (nominal dollars per barrel).....	109.93	128.30	93.65	115.20	138.12	166.56	202.47	1.6%
<b>Average</b> .....	<b>3.22</b>	<b>3.28</b>	<b>3.17</b>	<b>3.72</b>	<b>4.30</b>	<b>5.11</b>	<b>6.11</b>	<b>2.2%</b>

<sup>1</sup>Weighted average price delivered to U.S. refiners.

<sup>2</sup>Includes combined heat and power plants that have a non-regulatory status, and small on-site generating systems.

<sup>3</sup>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.

<sup>4</sup>Sales weighted-average price for all grades. Includes Federal, State and local taxes.

<sup>5</sup>Includes only kerosene type.

<sup>6</sup>Diesel fuel for on-road use. Includes Federal and State taxes while excluding county and local taxes.

<sup>7</sup>Includes electricity-only and combined heat and power plants that have a regulatory status.

<sup>8</sup>Weighted averages of end-use fuel prices are derived from the prices in each sector and the corresponding sectoral consumption.

Note: Data for 2011 and 2012 are model results and may differ from official EIA data reports.

**Sources:** 2011 and 2012 Brent and West Texas Intermediate crude oil spot prices: Thomson Reuters. 2011 and 2012 average imported crude oil cost: U.S. Energy Information Administration (EIA), *Monthly Energy Review*, DOE/EIA-0035(2013/09) (Washington, DC, September 2013). 2011 and 2012 prices for motor gasoline, distillate fuel oil, and jet fuel are based on: EIA, *Petroleum Marketing Monthly*, DOE/EIA-0380(2013/08) (Washington, DC, August 2013). 2011 and 2012 residential, commercial, industrial, and transportation sector petroleum product prices are derived from: EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report." 2011 and 2012 electric power prices based on: EIA, *Monthly Energy Review*, DOE/EIA-0035(2013/09) (Washington, DC, September 2013). 2011 and 2012 E85 prices derived from monthly prices in the Clean Cities Alternative Fuel Price Report. 2011 and 2012 wholesale ethanol prices derived from Bloomberg U.S. average rack price. **Projections:** EIA, AEO2014 National Energy Modeling System run REF2014.D102413A.