Total energy supply, disposition, and price summary (quadrillion Btu per year, unless otherwise noted) Table D1.

(quadrillion Btu per yea	ar, urne:		WISE IIU	ieu)		Dunia -+!				
		<u> </u>			1	Projections	1	I	00	
			2025	•		2040	•	ļ	2050	
Supply, disposition, and prices	2016	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Production										
Crude oil and lease condensate	18.28	17.98	21.69	27.77	14.75	21.56	35.10	12.09	20.53	35.66
Natural gas plant liquids	4.78	5.27	6.45	7.21	4.15	6.36	8.22	3.87	6.29	8.49
Dry natural gas	27.40	28.70	34.15	38.64	28.26	38.98	49.47	26.93	41.61	54.58
Coal <sup>1</sup>	15.18	16.47	15.06	13.43	15.63	12.59	10.42	15.47	11.99	9.01
Nuclear / uranium²	8.34	8.09	8.09	8.02	7.94	7.34	7.00	9.04	6.36	5.32
Conventional hydroelectric power	2.50	3.01	2.95	2.92	3.07	2.99	2.92	3.10	3.02	2.94
Biomass <sup>3</sup>	4.20	4.52	4.45	4.42	4.77	4.48	4.35	5.03	4.54	4.37
Other renewable energy4	3.04	7.68	6.20	5.50	11.70	8.04	6.15	13.94	9.73	6.80
Other <sup>5</sup>	0.92	0.99	1.03	1.04	0.85	0.91	0.86	0.87	0.92	0.85
Total	84.64	92.70	100.06	108.95	91.13	103.24	124.49	90.33	104.98	128.03
Imports										
Crude oil	17.49	16.73	16.63	13.37	17.91	17.12	9.46	20.62	18.87	9.06
Petroleum and other liquids <sup>6</sup>	4.18	4.42	4.26	4.63	4.21	3.94	3.98	4.50	3.75	3.30
Natural gas <sup>7</sup>	3.08	2.07	1.74	1.49	2.07	1.31	1.12	2.46	1.29	1.18
Other imports <sup>8</sup>	0.45	0.29	0.29	0.28	0.22	0.18	0.17	0.31	0.18	0.15
Total	25.20	23.50	22.93	19.78	24.42	22.55	14.73	27.90	24.08	13.70
Exports										
Petroleum and other liquids9	10.19	10.11	14.60	18.52	7.50	15.16	22.79	4.92	13.17	20.18
Natural gas <sup>10</sup>	2.09	5.20	6.47	7.80	4.94	7.07	12.00	3.57	6.88	12.30
Coal	1.46	1.60	1.64	1.63	2.03	2.03	2.03	1.93	2.13	2.18
Total	13.74	16.91	22.70	27.95	14.48	24.26	36.82	10.41	22.17	34.66
Discrepancy <sup>11</sup>	-0.37	0.02	0.05	-0.01	0.23	0.15	0.04	0.24	0.20	0.01
Consumption										
Petroleum and other liquids <sup>12</sup>	36.89	36.84	37.03	37.15	35.68	36.16	36.49	38.19	38.54	38.88
Natural gas	28.59	25.33	29.14	32.02	25.09	32.87	38.13	25.53	35.65	42.98
Coal <sup>13</sup>	13.93	14.90	13.47	11.85	13.60	10.55	8.36	13.65	9.85	6.80
Nuclear / uranium <sup>2</sup>	8.34	8.09	8.09	8.02	7.94	7.34	7.00	9.04	6.36	5.32
Conventional hydroelectric power	2.50	3.01	2.95	2.92	3.07	2.99	2.92	3.10	3.02	2.94
Biomass <sup>14</sup>	2.76	2.98	2.91	2.88	3.29	3.00	2.87	3.66	3.10	2.90
Other renewable energy4	3.04	7.68	6.20	5.50	11.70	8.04	6.15	13.94	9.73	6.80
Other <sup>15</sup>	0.42	0.45	0.45	0.44	0.47	0.43	0.43	0.47	0.44	0.44
Total	96.47	99.27	100.24	100.77	100.84	101.38	102.36	107.57	106.70	107.06
Prices (2016 dollars per unit) Crude oil spot prices (dollars per barrel)										
Brent	43	91	86	81	119	109	96	127	117	101
West Texas Intermediate	43	85	80	74	115	103	88	124	110	91
Natural gas at Henry Hub	.0					.00	50			01
(dollars per million Btu)	2.50	7.12	4.51	3.44	9.76	5.07	3.40	10.30	5.83	3.33
Coal (dollars per ton)	2.00	2		0.17	00	0.01	0.10	. 0.00	0.00	0.00
at the minemouth <sup>16</sup>	33.9	34.6	34.7	34.2	39.0	37.9	37.5	40.5	40.1	39.8
Coal (dollars per million Btu)	55.0	00	· · · ·	J	55.0	50	50			55.0
at the minemouth <sup>16</sup>	1.69	1.76	1.75	1.71	1.97	1.87	1.83	2.05	1.96	1.91
Average end-use <sup>17</sup>	2.34	2.58	2.54	2.48	2.72	2.58	2.44	2.78	2.57	2.36

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Total energy supply, disposition, and price summary (continued) Table D1.

(quadrillion Btu per year, unless otherwise noted)

						Projections				
			2025			2040			2050	<u>.</u>
Supply, disposition, and prices	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Prices (nominal dollars per unit) Crude oil spot prices (dollars per barrel)										
Brent	43	111	104	97	201	179	158	265	236	206
West Texas Intermediate Natural gas at Henry Hub	43	104	97	89	194	169	145	260	223	186
(dollars per million Btu)	2.50	8.76	5.45	4.14	16.50	8.31	5.56	21.54	11.80	6.76
at the minemouth 16	33.9	42.6	42.0	41.2	66.0	62.1	61.5	84.7	81.1	80.9
at the minemouth <sup>16</sup>	1.69	2.16	2.11	2.06	3.33	3.07	3.00	4.28	3.97	3.87
Average end-use <sup>17</sup>	2.34	3.17	3.07	2.98	4.60	4.23	3.99	5.81	5.20	4.79
Average electricity (cents per kilowatthour)	10.3	14.7	13.5	12.9	21.7	18.6	17.3	27.2	23.5	21.3

<sup>&</sup>lt;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

<sup>&</sup>lt;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 are 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>9</sup>Includes re-exported liquefied natural gas.

<sup>1</sup>Balancing item. Includes unaccounted for supply, losses, gains, and net storage withdrawals.

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

coke, which is a solid, is included. Also included are hydrocarbon gas liquids and crude oil consumed as a fuel. Refer to Table A17 for detailed renewable liquid fuels consumption.

13Excludes coal converted to coal-based synthetic liquids and natural gas.

14Includes 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.

15Includes non-biogenic municipal waste, liquid hydrogen, and net electricity imports.

16Includes reported prices for both open market and captive mines. Prices weighted by production, which differs from average minemouth prices published in EIA data reports where it is weighted by reported sales.

17Prices weighted by consumption; weighted average excludes export free-alongside-ship (f.a.s.) prices.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2016 are model results and may differ from official EIA data reports.

Note: Totals may not equal sum of components due to independent rounding. Data for 2016 are model results and may differ from official EIA data reports.

Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a. Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a, and highrt.d120816a.

**Table D2.** Energy consumption by sector and source (quadrillion Btu per year, unless otherwise noted)

(quadrillion Btu per yea	ar, urne		wise no	ieu)		Drojosticas				
			2025		Ī	Projections			2050	
			2025			2040	1		2050	1
Sector and source	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	and	Reference	High oil and gas resource and technolog
Energy consumption										
Residential										
Propane	0.43	0.41	0.43	0.44	0.36	0.38	0.42	0.34	0.36	0.40
Kerosene	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Distillate fuel oil	0.43	0.40	0.40	0.40	0.30	0.30	0.30	0.25	0.25	0.25
Petroleum and other liquids subtotal	0.87	0.82	0.84	0.85	0.66	0.69	0.72	0.60	0.62	0.66
Natural gas	4.56	4.63	4.80	4.89	4.42	4.69	4.81	4.40	4.69	4.85
Renewable energy <sup>1</sup>	0.37	0.40	0.40	0.40	0.34	0.33	0.33	0.30	0.30	0.30
Electricity	4.81	4.65	4.72	4.76	4.87	5.05	5.15	5.00	5.19	5.35
Delivered energy	10.62	10.50	10.75	10.90	10.29	10.75	11.01	10.30	10.80	11.16
Electricity related losses	9.39	9.28	9.10	8.95	9.68	8.96	8.67	9.99	8.82	8.29
Total	20.01	19.78	19.85	19.86	19.97	19.71	19.68	20.30	19.63	19.46
Commercial										
Propane	0.19	0.18	0.19	0.21	0.19	0.22	0.26	0.21	0.23	0.28
Motor gasoline <sup>2</sup>	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.08
Kerosene	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.0
Distillate fuel oil	0.41	0.40	0.40	0.40	0.36	0.37	0.37	0.35	0.35	0.3
Residual fuel oil	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.07
Petroleum and other liquids subtotal	0.73	0.70	0.72	0.74	0.69	0.72	0.77	0.70	0.74	0.80
Natural gas	3.23	3.05	3.24	3.36	3.13	3.48	3.65	3.37	3.79	4.02
Coal	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Renewable energy <sup>3</sup>	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Electricity	4.64	4.58	4.62	4.64	4.91	4.99	5.05	5.46	5.53	5.62
Delivered energy	8.77	8.51	8.76	8.91	8.90	9.37	9.65	9.71	10.23	10.62
Electricity related losses  Total	9.06 <b>17.82</b>	9.14 <b>17.65</b>	8.91 <b>17.67</b>	8.73 <b>17.64</b>	9.77 <b>18.67</b>	8.87 <b>18.24</b>	8.50 <b>18.15</b>	10.92 <b>20.63</b>	9.41 <b>19.64</b>	8.7 <sup>2</sup> <b>19.3</b> 3
Industrial <sup>4</sup>										
Liquefied petroleum gases and other <sup>5</sup>	2.49	3.35	3.27	3.21	3.87	3.65	3.56	4.17	3.82	3.68
Motor gasoline <sup>2</sup>	0.22	0.22	0.23	0.23	0.22	0.23	0.25	0.22	0.24	0.26
Distillate fuel oil	1.29	1.53	1.54	1.55	1.61	1.63	1.69	1.73	1.75	1.8
Residual fuel oil	0.05	0.07	0.05	0.04	0.08	0.04	0.04	0.08	0.05	0.04
Petrochemical feedstocks	0.66	1.01	0.98	0.96	1.21	1.13	1.09	1.33	1.19	1.14
Other petroleum <sup>6</sup>	3.42	3.50	3.57	3.56	3.62	3.87	3.78	3.92	4.19	4.06
Petroleum and other liquids subtotal	8.14	9.69	9.63	9.56	10.60	10.56	10.40	11.44	11.24	10.98
Natural gas	7.95	8.79	9.17	9.33	9.15	9.77	9.95	9.86	10.44	10.60
Natural-gas-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lease and plant fuel <sup>7</sup>	1.62	1.57	1.79	2.03	1.55	1.98	2.53	1.46	2.09	2.73
Natural gas liquefaction for export <sup>8</sup>	0.02	0.28	0.38	0.50	0.36	0.46	0.87	0.30	0.46	0.87
Natural gas subtotal	9.58	10.64	11.34	11.86	11.07	12.21	13.35	11.61	12.98	14.19
Metallurgical coal	0.52	0.38	0.43	0.41	0.17	0.28	0.22	0.12	0.20	0.17
Other industrial coal	0.73	0.73	0.75	0.74	0.66	0.66	0.64	0.68	0.66	0.63
Coal-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net coal coke imports	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
Coal subtotal	1.25	1.12	1.19	1.16	0.84	0.95	0.87	0.81	0.87	0.82
Biofuels heat and coproducts	0.90	0.86	0.86	0.86	0.84	0.84	0.84	0.75	0.80	0.82
Renewable energy <sup>9</sup>	1.45	1.60	1.60	1.60	1.70	1.70	1.66	1.85	1.84	1.74
Electricity	3.23	3.76	3.80	3.82	3.88	3.96	3.98	4.19	4.22	4.20
Delivered energy	24.55	27.67	28.42	28.86	28.93	30.23	31.10	30.65	31.95	32.75
Electricity related losses	6.30	7.50	7.32	7.18	7.72	7.04	6.70	8.38	7.17	6.50
Total	30.85	35.17	35.74	36.04	36.65	37.27	37.79	39.03	39.12	39.25

Energy consumption by sector and source (continued) (quadrillion Btu per year, unless otherwise noted) Table D2.

(quadrillon Btu per yea	ar, arno		WISC 110	ieu)		Projections	<u> </u>			
			2025			2040			2050	
Sector and source	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technolog
Transportation				33			33			J
Propane	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Motor gasoline <sup>2</sup>	17.27	15.26	15.38	15.46	12.70	13.04	13.26	13.17	13.56	13.94
of which: E85 <sup>10</sup>	0.03	0.08	0.07	0.06	0.20	0.16	0.13	0.16	0.17	0.14
Jet fuel <sup>11</sup>	2.83	3.27	3.29	3.30	4.05	4.08	4.12	4.62	4.66	4.71
Distillate fuel oil12	6.54	6.72	6.78	6.83	6.31	6.40	6.46	6.92	6.96	6.94
Residual fuel oil	0.60	0.49	0.52	0.55	0.64	0.66	0.76	0.70	0.74	0.83
Other petroleum <sup>13</sup>	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Petroleum and other liquids subtotal	27.40	25.92	26.14	26.31	23.87	24.36	24.78	25.59	26.10	26.61
Pipeline fuel natural gas	0.69	0.61	0.71	0.79	0.63	0.78	0.95	0.63	0.83	1.06
Compressed / liquefied natural gas	0.07	0.12	0.13	0.13	0.25	0.29	0.30	0.35	0.42	0.46
Liquid hydrogen	0.00	0.03	0.03	0.03	0.06	0.06	0.06	0.08	0.08	0.08
Electricity  Delivered energy	0.04	0.14	0.14	0.15	0.33	0.33	0.34	0.40	0.41	0.42
Electricity related losses	<b>28.20</b> 0.07	<b>26.82</b> 0.29	<b>27.15</b> 0.28	<b>27.40</b> 0.27	<b>25.14</b> 0.65	<b>25.82</b> 0.59	<b>26.43</b> 0.57	<b>27.05</b> 0.80	<b>27.85</b> 0.70	<b>28.62</b> 0.64
Total	28.27	27.11	27.43	27.68	25.79	26.41	<b>27.00</b>	<b>27.85</b>	28.54	29.26
Unspecified sector <sup>14</sup>	-0.48	-0.43	-0.44	-0.44	-0.24	-0.25	-0.26	-0.23	-0.23	-0.24
Delivered energy consumption for all										
sectors										
Liquefied petroleum gases and other <sup>5</sup>	3.13	3.96	3.90	3.87	4.44	4.27	4.25	4.73	4.44	4.39
Motor gasoline <sup>2</sup>	17.28	15.21	15.33	15.42	12.71	13.06	13.29	13.19	13.58	13.97
of which: E85 <sup>10</sup>	0.03	0.08	0.07	0.06	0.20	0.16	0.13	0.16	0.17	0.14
Jet fuel <sup>11</sup>	3.28	3.68	3.70	3.72	4.56	4.60	4.63	5.20	5.25	5.3
Kerosene	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0
Distillate fuel oil	8.02	8.54	8.61	8.67	8.10	8.20	8.33	8.72	8.78	8.83
Residual fuel oil	0.71	0.63	0.63	0.65	0.77	0.77	0.86	0.85	0.86	0.94
Petrochemical feedstocks	0.66	1.01	0.98	0.96	1.21	1.13	1.09	1.33	1.19	1.14
Other petroleum <sup>15</sup>	3.58	3.66	3.73	3.72	3.78	4.04	3.94	4.08	4.36	4.22
Petroleum and other liquids subtotal	36.67	36.70	36.89	37.02	35.57	36.07	36.41	38.10	38.47	38.82
Natural gas	15.81	16.59	17.33	17.71	16.95	18.23	18.71	17.99	19.33	19.93
Natural-gas-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lease and plant fuel <sup>7</sup> Natural gas liquefaction for export <sup>8</sup>	1.62 0.02	1.57 0.28	1.79 0.38	2.03 0.50	1.55 0.36	1.98 0.46	2.53 0.87	1.46 0.30	2.09 0.46	2.73 0.87
Pipeline natural gas	0.69	0.28	0.30	0.30	0.63	0.40	0.87	0.63	0.40	1.06
Natural gas subtotal	18.13	19.06	20.22	21.03	19.50	21.45	23.06	20.37	22.71	24.58
Metallurgical coal	0.52	0.38	0.43	0.41	0.17	0.28	0.22	0.12	0.20	0.17
Other coal	0.77	0.78	0.80	0.79	0.70	0.71	0.69	0.72	0.71	0.68
Coal-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net coal coke imports	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.0
Coal subtotal	1.29	1.16	1.23	1.20	0.89	0.99	0.91	0.85	0.92	0.86
Biofuels heat and coproducts	0.90	0.86	0.86	0.86	0.84	0.84	0.84	0.75	0.80	0.82
Renewable energy <sup>16</sup>	1.95	2.13	2.13	2.13	2.17	2.17	2.12	2.29	2.27	2.10
Liquid hydrogen	0.00	0.03	0.03	0.03	0.06	0.06	0.06	0.08	0.08	0.08
Electricity	12.72	13.13	13.28	13.37	13.99	14.34	14.52	15.05	15.35	15.59
Delivered energy	71.66	73.06	74.63	75.64	73.01	75.92	77.93	77.48	80.60	82.92
Electricity related losses  Total	24.81 <b>96.47</b>	26.21 <b>99.27</b>	25.61 <b>100.24</b>	25.14 <b>100.77</b>	27.83 <b>100.84</b>	25.46 <b>101.38</b>	24.43 <b>102.36</b>	30.09 <b>107.57</b>	26.10 <b>106.70</b>	24.14 <b>107.0</b> 6
Electric power <sup>17</sup>										
Distillate fuel oil	0.09	0.09	0.09	0.08	0.07	0.06	0.05	0.07	0.05	0.04
Residual fuel oil	0.13	0.05	0.05	0.05	0.03	0.03	0.03	0.02	0.02	0.02
Petroleum and other liquids subtotal	0.22	0.14	0.13	0.13	0.10	0.09	0.08	0.09	0.07	0.06
Natural gas	10.46	6.27	8.93	10.99	5.60	11.43	15.07	5.16	12.94	18.40
Steam coal Nuclear / uranium <sup>18</sup>	12.64	13.73	12.24	10.64	12.71	9.55	7.45	12.80	8.93	5.9 <sup>4</sup>
	8.34 5.44	8.09 10.68	8.09 9.08	8.02 8.31	7.94 15.06	7.34 11.02	7.00 8.98	9.04 17.67	6.36 12.78	5.32 9.65
Renewable energy <sup>19</sup>			9.00	0.31	10.00	11.02	0.90	17.07	12.10	9.00
Renewable energy <sup>19</sup>						U 33	U 23	ሀ ኃ3	U 33	0.33
Renewable energy <sup>19</sup> Non-biogenic municipal waste  Electricity imports	0.23 0.19	0.23	0.23 0.19	0.23 0.19	0.23 0.18	0.23 0.14	0.23 0.14	0.23 0.17	0.23 0.14	0.23 0.14

Table D2. Energy consumption by sector and source (continued) (quadrillion Btu per year, unless otherwise noted)

(quadrillori Biu per yea	,					Projections				
			2025			2040			2050	
Sector and source	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Total energy consumption										
Liquefied petroleum gases and other <sup>5</sup>	3.13	3.96	3.90	3.87	4.44	4.27	4.25	4.73	4.44	4.39
Motor gasoline <sup>2</sup>	17.28	15.21	15.33	15.42	12.71	13.06	13.29	13.19	13.58	13.97
of which: E85 <sup>10</sup>	0.03	0.08	0.07	0.06	0.20	0.16	0.13	0.16	0.17	0.14
Jet fuel <sup>11</sup>	3.28	3.68	3.70	3.72	4.56	4.60	4.63	5.20	5.25	5.31
Kerosene	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Distillate fuel oil	8.11	8.64	8.69	8.75	8.17	8.26	8.38	8.79	8.83	8.87
Residual fuel oil	0.83	0.68	0.68	0.70	0.80	0.80	0.89	0.87	0.88	0.96
Petrochemical feedstocks	0.66	1.01	0.98	0.96	1.21	1.13	1.09	1.33	1.19	1.14
Other petroleum <sup>15</sup>	3.58	3.66	3.73	3.72	3.78	4.04	3.94	4.08	4.36	4.22
Petroleum and other liquids subtotal	36.89	36.84	37.03	37.15	35.68	36.16	36.49	38.19	38.54	38.88
Natural gas	26.27	22.86	26.26	28.71	22.55	29.65	33.79	23.15	32.27	38.33
Natural-gas-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lease and plant fuel7	1.62	1.57	1.79	2.03	1.55	1.98	2.53	1.46	2.09	2.73
Natural gas liquefaction for export8	0.02	0.28	0.38	0.50	0.36	0.46	0.87	0.30	0.46	0.87
Pipeline natural gas	0.69	0.61	0.71	0.79	0.63	0.78	0.95	0.63	0.83	1.06
Natural gas subtotal	28.59	25.33	29.14	32.02	25.09	32.87	38.13	25.53	35.65	42.98
Metallurgical coal	0.52	0.38	0.43	0.41	0.17	0.28	0.22	0.12	0.20	0.17
Other coal	13.41	14.51	13.04	11.43	13.42	10.26	8.13	13.52	9.64	6.61
Coal-to-liquids heat and power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net coal coke imports	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
Coal subtotal	13.93	14.90	13.47	11.85	13.60	10.55	8.36	13.65	9.85	6.80
Nuclear / uranium <sup>18</sup>	8.34	8.09	8.09	8.02	7.94	7.34	7.00	9.04	6.36	5.32
Biofuels heat and coproducts	0.90	0.86	0.86	0.86	0.84	0.84	0.84	0.75	0.80	0.82
Renewable energy <sup>20</sup>	7.39	12.81	11.20	10.44	17.23	13.18	11.10	19.95	15.05	11.82
Liquid hydrogen	0.00	0.03	0.03	0.03	0.06	0.06	0.06	0.08	0.08	0.08
Non-biogenic municipal waste	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Electricity imports	0.19	0.20	0.19	0.19	0.18	0.14	0.14	0.17	0.14	0.14
Total	96.47	99.27	100.24	100.77	100.84	101.38	102.36	107.57	106.70	107.06
Energy use and related atatistics										
Energy use and related statistics	71.66	73.06	74.63	75.64	73.01	75.92	77.93	77.48	80.60	82.92
Delivered energy use	96.47	99.27	100.24	100.77	100.84	101.38	102.36	107.57	106.70	107.06
Total energy use	1.22	1.17	1.17	1.17	1.10	1.10	1.10	1.21	1.25	1.27
Ethanol consumed in motor gasoline and E85.	324		348							
Population (millions)	16,652	348 20,414	20,558	348 20,680	381 27,602	381 27,852	381	399	399 33,653	399 34,076
Carbon dioxide emissions (million metric tons)	5,157	4,982	5,069	5,079	4,704	4,878	28,146 4,982	33,425 4,863	5,084	5,217

¹Includes wood used for residential heating. See Table A4 and/or Table A17 for estimates of nonmarketed renewable energy consumption for geothermal heat pumps, solar thermal water heating, and electricity generation from wind and solar photovoltaic sources.
²Includes ethanol and ethers blended into gasoline.
³Excludes ethanol. Includes commercial sector consumption of wood and wood waste, landfill gas, municipal waste, and other biomass for combined heat and power.
See Table A5 and/or Table A17 for estimates of nonmarketed renewable energy consumption for solar thermal water heating and electricity generation from wind and solar

See Table A5 and/or Table A17 for estimates of nonmarketed renewable energy consumption for solar thermal water heating and electricity generation from wind and solar photovoltaic sources.

Includes energy for combined heat and power plants that have a non-regulatory status, and small on-site generating systems.

Includes ethane, natural gasoline, and refinery olefins.

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

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

Placetime in facilities that liquefy natural gas for export.

Includes consumption of energy produced from hydroelectric, wood and wood waste, municipal waste, and other biomass sources. Excludes ethanol in motor gasoline.

To address cold starting issues, the percentage of ethanol varies seasonally. The annual average ethanol content of 74 percent is used for these projections.

Includes only kerosene type.

Description of the process of the process of the projections of the projections of the projection of the projectio

12Diesel fuel for on- and off- road use.
13Includes aviation gasoline and lubricants.
14Represents consumption unattributed to the sectors above.
15Includes aviation gasoline, petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.
16Includes electricity generated for sale to the grid and for own use from renewable sources, and non-electric energy from renewable sources. Excludes ethanol and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal water heaters.
17Includes consumption of energy by electricity-only and combined heat and power plants that have a regulatory status.
18These 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.
19Includes conventional hydroelectric, geothermal, wood and wood waste, biogenic municipal waste, other biomass, wind, photovoltaic, and solar thermal sources.
Excludes ethanol and nonmarked renewable sources. Excludes ethanol and nonmarked renewable sources. Excludes ethanol and nonmarketed renewable energy consumption of energy by electricity-only and combined heat and power plants that have a regulatory status.

18These 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.

Excludes not electricity imports.

20 Includes conventional hydroelectric, geothermal, wood and wood waste, biogenic municipal waste, other biomass, wind, photovoltaic, and solar thermal sources.

20 Includes conventional hydroelectric, geothermal, wood and wood waste, biogenic municipal waste, other biomass, wind, photovoltaic, and solar thermal sources.

Excludes ethanol, net electricity imports, and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal water heaters.

heaters.

Btu = British thermal unit.

Note: Includes estimated consumption for petroleum and other liquids. Totals may not equal sum of components due to independent rounding.

Data for 2016 are model results and may differ from official EIA data reports.

Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a.

Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a.

Energy prices by sector and source (2016 dollars per million Btu, unless otherwise noted) Table D3.

(2016 dollars per millio	n Biu, i	uniess o	tnerwise	e notea)		5				
					1	Projections	i	1		
			2025			2040			2050	
Sector and source	2016	Low oil and gas resource and	Reference	and	Low oil and gas resource and	Reference	High oil and gas resource and	Low oil and gas resource and	Reference	High oil and gas resource and
		technology		technology	technology		technology	technology		technology
Residential										
Propane	16.26	21.34	18.13	15.77	26.64	20.85	14.65	28.74	22.50	15.09
Distillate fuel oil	15.40	24.62	24.05	23.97	29.54	28.02	27.07	30.88	29.37	28.03
Natural gas	9.91	14.16	11.42	10.18	17.81	13.18	11.53	19.39	14.34	11.92
Electricity	36.47	42.59	40.10	38.80	45.44	40.69	38.18	47.01	42.18	38.46
Commercial										
Propane	14.54	18.91	16.15	14.11	23.48	18.49	13.14	25.29	19.91	13.53
Distillate fuel oil	13.52	21.01	20.37	20.28	25.88	24.22	23.27	26.91	25.40	23.99
Residual fuel oil	5.38	11.41	11.01	11.11	15.09	14.16	13.82	16.34	15.28	14.38
Natural gas	7.19	12.86	10.14	8.92	15.94	11.44	9.87	17.20	12.27	10.00
Electricity	30.38	36.00	33.61	32.42	38.29	33.75	31.41	38.28	33.98	30.76
Industrial <sup>1</sup>										
Propane	11.49	16.71	13.41	10.98	22.15	16.20	9.82	24.31	17.89	10.28
Distillate fuel oil	13.53	21.47	20.80	20.72	26.36	24.69	23.75	27.38	25.86	24.44
Residual fuel oil	5.15	13.44	12.95	12.93	17.14	16.09	15.58	18.24	17.20	16.17
Natural gas <sup>2</sup>	3.50	8.11	5.48	4.34	10.51	5.93	4.27	11.31	6.58	4.15
Metallurgical coal	5.64	6.65	6.58	6.57	7.45	7.40	7.29	7.12	7.13	7.05
Other industrial coal	3.34	3.49	3.46	3.43	3.54	3.45	3.37	3.68	3.55	3.41
Coal to liquids  Electricity	20.36	24.00	22.10	21.14	26.62	22.74	20.75	26.96	23.33	20.61
Electricity	20.30	24.00	22.10	21.14	20.02	22.14	20.75	20.90	23.33	20.01
Transportation										
Propane	17.33	22.40	19.19	16.83	27.70	21.91	15.71	29.80	23.56	16.15
E85 <sup>3</sup>	25.93	28.83	29.80	29.82	28.42	28.74	28.91	33.10	31.15	30.30
Motor gasoline <sup>4</sup>	18.34	24.98	24.31	24.13	28.96	27.47	26.42	30.26	28.60	26.71
Jet fuel <sup>5</sup>	9.75	18.34	17.68	17.55	23.92	22.10	21.01	25.54	23.92	22.40
Diesel fuel (distillate fuel oil) <sup>6</sup>	16.80	26.43	25.73	25.63	31.35	29.62	28.66	32.28	30.75	29.31
Residual fuel oil Natural gas <sup>7</sup>	5.96 16.45	12.37 19.17	11.71 16.44	11.51	16.39 19.28	15.08	13.98	17.75 19.77	16.35 15.63	15.21 13.52
Electricity	29.68	42.16	39.36	15.35 37.99	44.34	15.09 39.24	13.62 36.72	44.30	38.89	35.57
Floatric manual <sup>8</sup>										
Electric power <sup>8</sup> Distillate fuel oil	11.95	20.07	19.48	19.47	24.80	23.26	22.39	26.12	24.62	23.26
Residual fuel oil	8.09	15.86	15.41	15.48	19.49	18.53	18.07	19.80	18.90	17.78
Natural gas	3.02		4.81	3.76	9.62	5.44	3.95	10.24	6.13	3.94
Steam coal	2.14	2.41	2.33	2.24	2.61	2.37	2.20	2.68	2.39	2.09
Uranium	0.56	0.74	0.74	0.74	1.08	1.08	1.08	1.43	1.43	1.43
Average price to all users <sup>9</sup>										
Propane	14.05	19.07	15.95	13.64	24.13	18.49	12.44	26.09	20.02	12.82
E85 <sup>3</sup>	25.93	28.83	29.80	29.82	28.42	28.74	28.91	33.10	31.15	30.30
Motor gasoline <sup>4</sup>	18.33	24.98	24.31	24.13	28.96	27.48	26.42	30.26	28.60	26.71
Jet fuel <sup>5</sup>	9.75	18.34	17.68	17.55	23.92	22.10	21.01	25.54	23.92	22.40
Distillate fuel oil	15.98	25.15	24.47	24.38	30.00	28.30	27.33	31.01	29.49	28.03
Residual fuel oil	6.19	12.63	11.98	11.82	16.49	15.20	14.19	17.75	16.37	15.25
Natural gas	4.91	9.83	6.98	5.71	12.60	7.65	5.87	13.63	8.34	5.78
Metallurgical coal	5.64	6.65	6.58	6.57	7.45	7.40	7.29	7.12	7.13	7.05
Other coal	2.21	2.47	2.40	2.33	2.66	2.45	2.31	2.74	2.48	2.24
Coal to liquids										
Electricity	30.14	34.97	32.69	31.53	37.68	33.28	31.01	38.19	33.96	30.80
Non-renewable energy expenditures by sector (billion 2016 dollars)										
Residential	234	282	262	251	318	284	266	338	302	277
Commercial	174	218	202	194	255	224	210	285	252	229
Industrial <sup>1</sup>	158	288	248	226	380	299	251	436	340	271
Transportation	450	621	609	608	682	656	640	769	739	707
Total non-renewable expenditures	1,016	1,410	1,320	1,280	1,636	1,463	1,368	1,828	1,633	1,484
Transportation renewable expenditures  Total expenditures	1 <b>1,017</b>	2 <b>1,413</b>	2 <b>1,322</b>	2 <b>1,282</b>	6 <b>1,641</b>	5 <b>1,468</b>	4 1,371	5 <b>1,833</b>	5 <b>1,638</b>	4 <b>1,488</b>
rotar experialtares	1,017	1,+13	1,322	1,202	1,041	1,400	1,371	1,000	1,000	1,700

Table D3. Energy prices by sector and source (continued) (nominal dollars per million Btu, unless otherwise noted)

(Horrinal dollars per III					/	Projections	i			
			2025			2040			2050	
Sector and source	2016	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Residential										
Propane	16.26	26.25	21.94	18.95	45.05	34.19	24.00	60.09	45.53	30.64
Distillate fuel oil	15.40	30.28	29.10	28.81	49.96	45.96	44.37	64.55	59.44	56.92
Natural gas	9.91	17.42	13.81	12.23	30.12	21.62	18.89	40.54	29.03	24.21
Electricity	36.47	52.38	48.52	46.63	76.85	66.73	62.57	98.29	85.37	78.11
Commercial										
Propane	14.54	23.26	19.54	16.96	39.70	30.32	21.54	52.87	40.29	27.47
Distillate fuel oil	13.52	25.85	24.64	24.37	43.76	39.72	38.14	56.27	51.40	48.71
Residual fuel oil	5.38	14.03	13.32	13.36	25.52	23.22	22.66	34.17	30.92	29.20
Natural gas	7.19	15.82	12.27	10.72	26.95	18.75	16.17	35.97	24.83	20.31
Electricity	30.38	44.28	40.67	38.97	64.75	55.34	51.48	80.04	68.78	62.46
Industrial <sup>1</sup>										
Propane	11.49	20.54	16.22	13.19	37.45	26.56	16.10	50.82	36.21	20.87
Distillate fuel oil	13.53	26.40	25.17	24.91	44.58	40.48	38.92	57.25	52.34	49.63
Residual fuel oil	5.15	16.53	15.67	15.54	28.99	26.38	25.53	38.13	34.80	32.84
Natural gas <sup>2</sup>	3.50	9.98	6.64	5.22	17.77	9.73	7.00	23.65	13.32	8.42
Metallurgical coal	5.64	8.18	7.96	7.90	12.60	12.13	11.95	14.89	14.44	14.32
Other industrial coal	3.34	4.29	4.19	4.13	5.99	5.65	5.52	7.69	7.19	6.92
Coal to liquids										
Electricity	20.36	29.52	26.75	25.41	45.01	37.29	34.01	56.38	47.22	41.84
Transportation										
Propane	17.33	27.55	23.22	20.23	46.84	35.93	25.74	62.31	47.68	32.80
E85 <sup>3</sup>	25.93	35.45	36.06	35.84	48.06	47.13	47.39	69.21	63.05	61.53
Motor gasoline4	18.34	30.73	29.42	29.00	48.97	45.06	43.30	63.28	57.88	54.24
Jet fuel <sup>5</sup>	9.75	22.55	21.39	21.09	40.45	36.24	34.43	53.40	48.41	45.49
Diesel fuel (distillate fuel oil) <sup>6</sup>	16.80	32.50	31.14	30.81	53.02	48.58	46.97	67.49	62.23	59.51
Residual fuel oil	5.96	15.21	14.17	13.83	27.71	24.73	22.91	37.12	33.08	30.90
Natural gas <sup>7</sup>	16.45	23.58	19.89	18.45	32.60	24.75	22.33	41.34	31.63	27.46
Electricity	29.68	51.86	47.63	45.66	74.97	64.34	60.18	92.63	78.72	72.23
Electric power <sup>8</sup>										
Distillate fuel oil	11.95	24.69	23.57	23.40	41.93	38.14	36.70	54.62	49.84	47.23
Residual fuel oil	8.09	19.51	18.65	18.61	32.97	30.38	29.61	41.39	38.25	36.11
Natural gas	3.02	9.03	5.82	4.52	16.26	8.92	6.48	21.40	12.41	8.01
Steam coal	2.14	2.96	2.82	2.70	4.41	3.89	3.60	5.61	4.83	4.24
Uranium	0.56	0.91	0.89	0.89	1.82	1.77	1.77	2.99	2.90	2.91

Table D3. **Energy prices by sector and source (continued)** 

(nominal dollars per million Btu, unless otherwise noted)

						Projections	3			
			2025			2040			2050	
Sector and source	2016	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Average price to all users <sup>9</sup>										
Propane	14.05	23.46	19.29	16.39	40.80	30.32	20.39	54.56	40.52	26.04
E85 <sup>3</sup>	25.93	35.45	36.06	35.84	48.06	47.13	47.39	69.21	63.05	61.53
Motor gasoline4	18.33	30.73	29.42	29.00	48.97	45.06	43.30	63.28	57.88	54.24
Jet fuel <sup>5</sup>	9.75	22.55	21.39	21.09	40.45	36.24	34.43	53.40	48.41	45.49
Distillate fuel oil	15.98	30.93	29.61	29.31	50.73	46.41	44.79	64.84	59.68	56.93
Residual fuel oil	6.19	15.53	14.49	14.20	27.89	24.93	23.25	37.11	33.13	30.96
Natural gas	4.91	12.09	8.45	6.86	21.30	12.54	9.62	28.49	16.88	11.74
Metallurgical coal	5.64	8.18	7.96	7.90	12.60	12.13	11.95	14.89	14.44	14.32
Other coal	2.21	3.04	2.91	2.80	4.50	4.02	3.78	5.73	5.02	4.54
Coal to liquids										
Electricity	30.14	43.00	39.55	37.90	63.72	54.57	50.83	79.85	68.73	62.55
Non-renewable energy expenditures by sector (billion nominal dollars)										
Residential	234	347	316	302	538	465	437	707	611	563
Commercial	174	268	244	233	431	368	344	597	509	465
Industrial <sup>1</sup>	158	355	300	272	643	491	412	911	689	550
Transportation	450	764	736	731	1,153	1,075	1,049	1,607	1,496	1,435
Total non-renewable expenditures	1,016	1,734	1,597	1,538	2,766	2,399	2,241	3,821	3,305	3,013
Transportation renewable expenditures	1	3	2	2	10	7	6	11	10	9
Total expenditures	1,017	1,737	1,599	1,541	2,776	2,407	2,248	3,832	3,315	3,022

¹Includes energy for combined heat and power plants that have a non-regulatory status, and small on-site generating systems.
²Excludes use for lease and plant fuel.
³E85 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 these projections.
⁴Sales weighted-average price for all grades. Includes Federal, State, and local taxes.
⁵Kerosene-type jet fuel. Includes Federal and State taxes while excluding county and local taxes.
⁵Diesel fuel for on-road use. Includes Federal and State taxes while excluding county and local taxes.
¹Natural gas used as fuel in motor vehicles, trains, and ships. Includes estimated motor vehicle fuel taxes and estimated dispensing costs or charges.
¹Includes electricity-only and combined heat and power plants that have a regulatory status.
³Weighted averages of end-use fuel prices are derived from the prices shown in each sector and the corresponding sectoral consumption.
Btu = British thermal unit.
- - = Not applicable.
Note: Data for 2016 are model results and may differ from official EIA data reports.
Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a. Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a, and highrt.d120816a.

**Petroleum and other liquids supply and disposition** (million barrels per day, unless otherwise noted) Table D4.

(million barrels per day	, unles	s otherw	rise note	ed)						
						Projections	i			
			2025			2040			2050	
Supply and disposition	2016	Low oil and gas		High oil	Low oil and gas		High oil	Low oil and gas		High oil
		resource	Reference		resource	Reference	and gas resource	resource	Reference	and gas resource
		and technology	,	and technology	and technology		and technology	and technology		and technology
Omeda all			II.				37			
Crude oil  Domestic crude production <sup>1</sup>	8.74	8.61	10.38	13.32	7.03	10.34	16.92	5.76	9.86	17.24
Alaska	0.48	0.54	0.54	0.82	0.48	0.47	1.05	0.30	0.30	0.63
Lower 48 states	8.27	8.06	9.84	12.50	6.55	9.87	15.86	5.46	9.57	16.61
Net imports	7.47	6.92	6.87	5.35	7.42	7.06	2.45	8.68	7.87	1.99
Gross imports	7.93	7.56	7.51	6.02	8.05	7.69	4.24	9.31	8.50	4.06
Exports	0.46	0.63	0.63	0.67	0.63	0.64	1.79	0.63	0.63	2.07
Other crude supply <sup>2</sup>	0.09	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Total crude supply	16.30	15.60	17.32	18.75	14.45	17.40	19.37	14.44	17.73	19.23
Net product imports	-2.64	-2.24	-4.78	-6.68	-0.82	-5.17	-8.24	0.60	-4.32	-7.12
Gross refined product imports <sup>3</sup>	0.83	1.23	1.10	1.15	1.55	1.33	1.12	1.85	1.37	0.92
Unfinished oil imports	0.63	0.50	0.50	0.52	0.39	0.39	0.41	0.34	0.34	0.35
Blending component imports	0.62	0.53	0.52	0.54	0.30	0.32	0.34	0.27	0.34	0.33
Exports	4.66	4.49	6.89	8.89	3.06	7.21	10.10	1.86	6.30	8.67
Refinery processing gain <sup>4</sup>	1.08	1.00	1.02	0.98	0.97	1.01	0.92	0.96	0.99	0.86
Product stock withdrawal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural gas plant liquids	3.52	3.94	4.82	5.38	3.11	4.76	6.13	2.90	4.71	6.33
Supply from renewable sources	1.05	1.06	1.06	1.07	1.01	1.01	1.01	1.10	1.13	1.15
Ethanol	0.91	0.87	0.87	0.88	0.82	0.82	0.83	0.91	0.94	0.96
Domestic production	0.96	0.96	0.96	0.96	0.92	0.92	0.92	0.83	0.88	0.91
Net imports	-0.05	-0.08	-0.08	-0.08	-0.09	-0.09	-0.09	0.09	0.06	0.04
Stock withdrawal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biodiesel	0.14	0.09	0.09	0.09	0.05	0.05	0.05	0.05	0.05	0.05
Domestic production	0.10	0.05	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.01
Net imports	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Stock withdrawal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other biomass-derived liquids <sup>5</sup>	0.00	0.10	0.10	0.10	0.14	0.14	0.14	0.14	0.14	0.14
Domestic production	0.00	0.10	0.10	0.10	0.14	0.14	0.14	0.14	0.14	0.14
Net imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stock withdrawal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquids from gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquids from coal  Other <sup>6</sup>	0.00 0.22	0.00 0.27	0.00 0.28	0.00 0.29	0.00 0.27	0.00	0.00 0.28	0.00 0.28	0.00 0.30	0.00 0.27
Cuter	0.22	0.27	0.20	0.23	0.21	0.50	0.20	0.20	0.50	0.27
Total primary supply <sup>7</sup>	19.54	19.64	19.74	19.79	18.99	19.31	19.46	20.27	20.54	20.72
Product supplied										
by fuel										
Liquefied petroleum gases and other8	2.52	3.12	3.11	3.08	3.40	3.41	3.38	3.59	3.53	3.49
Motor gasoline <sup>9</sup>	9.35	8.26	8.33	8.38	6.94	7.12	7.24	7.21	7.43	7.64
of which: E85 <sup>10</sup>	0.02	0.06	0.05	0.04	0.14	0.11	0.09	0.11	0.11	0.10
Jet fuel <sup>11</sup>	1.59	1.78	1.79	1.80	2.21	2.23	2.25	2.52	2.54	2.57
Distillate fuel oil <sup>12</sup>	3.82	4.10	4.13	4.15	3.88	3.92	3.98	4.17	4.20	4.22
of which: Diesel	3.66	3.64	3.67	3.70	3.48	3.53	3.58	3.79	3.81	3.83
Residual fuel oilOther <sup>13</sup>	0.34	0.29	0.30	0.30	0.35	0.35	0.39	0.38	0.38	0.42
by sector	1.97	2.10	2.11	2.10	2.24	2.31	2.26	2.43	2.48	2.40
Residential and commercial	0.91	Λ 0 <del>7</del>	0.00	0.04	0.70	Λ 04	Λ 07	0 7F	0.70	0.00
Industrial <sup>14</sup>	4.54	0.87 5.60	0.89 5.57	0.91 5.51	0.78 6.08	0.81 6.12	0.87 6.01	0.75 6.52	0.79 6.48	0.86 6.32
Transportation	14.17	13.36	13.47	13.56	12.25	12.49	12.70	13.12	13.39	13.65
Electric power <sup>15</sup>	0.10	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.03	0.03
Unspecified sector <sup>16</sup>	-0.24	-0.22	-0.23	-0.23	-0.13	-0.14	-0.14	-0.12	-0.13	-0.13
Total product supplied	19.59	19.67	19.77	19.81	19.02	19.34	19.48	20.30	20.57	20.73
Discrepancy <sup>17</sup>	-0.05	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.03	-0.02	-0.01

Petroleum and other liquids supply and disposition (continued) Table D4.

(million barrels per day, unless otherwise noted)

						Projections				
			2025			2040			2050	
Supply and disposition	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Domestic refinery distillation capacity <sup>18</sup>	18.4	19.0	19.0	19.5	19.0	19.0	20.5	19.0	19.0	20.5
Capacity utilization rate (percent) <sup>19</sup>	90.1	83.7	92.8	97.8	77.3	92.8	95.9	77.1	94.4	20.5 95.0
Net import share of product supplied (percent)  Expenditures for imported crude oil and	24.7	23.6	10.4	-6.9	34.5	9.5	-30.0	46.4	17.7	-24.3
petroleum products (billion 2016 dollars)	127	245	233	180	338	299	156	417	352	158

<sup>&</sup>lt;sup>1</sup>Includes lease condensate.

<sup>&</sup>lt;sup>3</sup>Chrategic petroleum reserve stock additions plus unaccounted for crude oil and crude oil stock withdrawals.

<sup>3</sup>Includes other hydrocarbons and alcohols.

<sup>4</sup>The volumetric amount by which total output is greater than input due to the processing of crude oil into products which, in total, have a lower specific gravity than the

<sup>\*</sup>The volumetric amount by which total output is greater than input due to the processing of crude oil into products which, in total, have a lower specific gravity than the crude oil processed.

\*Includes pyrolysis oils, biomass-derived Fischer-Tropsch liquids, biobutanol, and renewable feedstocks used for the on-site production of diesel and gasoline.

\*Includes domestic sources of other blending components, other hydrocarbons, and ethers.

\*Total crude supply, net product imports, refinery processing gain, product stock withdrawal, natural gas plant liquids, supply from renewable sources, liquids from gas, liquids from coal, and other supply.

\*Includes ethane, natural gasoline, and refinery olefins.

\*Includes ethane and and ethers blended into gasoline.

\*Includes ethane and and ethers blended into gasoline.

\*Includes ethanol and ethers blended into gasoline.

\*Includes only kerosene type.

\*Includes only kerosene type.

\*Includes only kerosene type.

\*Includes distillate fuel oil from petroleum and biomass feedstocks.

\*Includes distillate fuel oil from petroleum and biomass feedstocks, lubricants, waxes, asphalt, road oil, still gas, special naphthas, petroleum coke, crude oil product supplied, methanol, and miscellaneous petroleum products.

\*Includes energy for combined heat and power plants that have a non-regulatory status, and small on-site generating systems.

\*Includes consumption of energy by electricity-only and combined heat and power plants that have a regulatory status.

\*Represents consumption unattributed to the sectors above.

\*Balancing item. Includes unaccounted for supply, losses, and gains.

\*End-of-year operable capacity.

\*Retire is calculated by dividing the gross annual input to atmospheric crude oil distillation units by their operable refining capacity in barrels per calendar day.

Note: Totals may not equal sum of components due to independent rounding. Data for 2016 are model results and may differ from official EIA data reports.

\*Sources: 2016: EIA, \*Short-Term Energy Outlook\*

Table D5.

Petroleum and other liquids prices (2016 dollars per gallon, unless otherwise noted)

(2010 dollars per galic	1, 411100					Projections	;			
			2025			2040			2050	
Sector and fuel	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology
Crude oil prices (2016 dollars per barrel)										
Brent spot	43	91	86	81	119	109	96	127	117	101
West Texas Intermediate spot	43	85	80	74	115	103	88	124	110	91
Average imported refiners acquisition cost <sup>1</sup>	38	82	79	75	108	100	91	116	108	96
Brent / West Texas Intermediate spread	1	6	6	7	4	7	8	2	6	10
Delivered sector product prices										
Residential										
Propane	1.49	1.95	1.66	1.44	2.43	1.90	1.34	2.62	2.05	1.38
Distillate fuel oil	2.12	3.38	3.31	3.30	4.05	3.85	3.72	4.24	4.04	3.85
Commercial										
Distillate fuel oil	1.86	2.89	2.80	2.79	3.55	3.33	3.20	3.69	3.49	3.30
Residual fuel oil	0.80	1.71	1.65	1.66	2.26	2.12	2.07	2.45	2.29	2.15
Residual fuel oil (2016 dollars per barrel).	34	72	69	70	95	89	2.07 87	103	96	90
, , , , , ,										
Industrial <sup>2</sup>										
Propane	1.05	1.53	1.22	1.00	2.02	1.48	0.90	2.22	1.63	0.94
Distillate fuel oil	1.86	2.95	2.86	2.85	3.62	3.39	3.26	3.76	3.55	3.36
Residual fuel oil	0.77	2.01	1.94	1.94	2.57	2.41	2.33	2.73	2.57	2.42
Residual fuel oil (2016 dollars per barrel).	32	84	81	81	108	101	98	115	108	102
Transportation										
Propane	1.58	2.05	1.75	1.54	2.53	2.00	1.43	2.72	2.15	1.48
E85 <sup>3</sup>	2.46	2.74	2.84	2.84	2.70	2.73	2.75	3.15	2.96	2.88
Ethanol wholesale price	2.22	2.92	2.83	2.72	2.50	2.42	2.43	2.45	2.31	2.30
Motor gasoline4	2.21	3.00	2.92	2.90	3.48	3.30	3.17	3.62	3.42	3.19
Jet fuel <sup>5</sup>	1.32	2.48	2.39	2.37	3.23	2.98	2.84	3.45	3.23	3.02
Diesel fuel (distillate fuel oil)6	2.31	3.63	3.54	3.52	4.30	4.07	3.94	4.43	4.23	4.03
Residual fuel oil	0.89	1.85	1.75	1.72	2.45	2.26	2.09	2.66	2.45	2.28
Residual fuel oil (2016 dollars per barrel).	37	78	74	72	103	95	88	112	103	96
Electric power <sup>7</sup>										
Distillate fuel oil	1.64	2.76	2.68	2.68	3.40	3.20	3.08	3.58	3.38	3.20
Residual fuel oil	1.21	2.37	2.31	2.32	2.92	2.77	2.70	2.96	2.83	2.66
Residual fuel oil (2016 dollars per barrel).	51	100	97	97	123	116	114	124	119	112
Average prices, all sectors <sup>8</sup>										
Propane	1.28	1.74	1.46	1.25	2.20	1.69	1.14	2.38	1.83	1.17
Motor gasoline <sup>4</sup>	2.21	3.00	2.92	2.90	3.48	3.30	3.17	3.62	3.42	3.19
Jet fuel <sup>5</sup>	1.32	2.48	2.39	2.37	3.23	2.98	2.84	3.45	3.23	3.02
Distillate fuel oil	2.20	3.45	3.36	3.35	4.12	3.89	3.76	4.25	4.05	3.85
Residual fuel oil	0.93	1.89	1.79	1.77	2.47	2.28	2.12	2.66	2.45	2.28
Residual fuel oil (2016 dollars per barrel).	39	79	75	74	104	96	89	112	103	96
Average	1.87	2.66	2.55	2.51	3.14	2.88	2.69	3.30	3.04	2.77

Petroleum and other liquids prices (continued) Table D5. (nominal dollars per gallon, unless otherwise noted)

(nominal dollars per ga	,					Projections	;			
			2025			2040			2050	<u></u>
Sector and fuel	2016	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	and	Reference	High oil and gas resource and technology
Crude oil prices (nominal dollars per barrel)										
Brent spot	43		104							
West Texas Intermediate spot	43									
Average imported refiners acquisition cost <sup>1</sup>	38	101	95	90	183	165	149	243	218	194
Delivered sector product prices										
Residential										
Propane	1.49	2.40	2.00	1.73	4.11	3.12	2.19	5.49	4.16	2.80
Distillate fuel oil	2.12	4.16	4.00	3.96	6.86	6.32	6.10	8.86	8.17	7.83
Commercial										
Distillate fuel oil	1.86	3.55	3.39	3.35	6.00	5.46	5.24	7.72	7.06	6.70
Residual fuel oil	0.80	2.10	1.99	2.00	3.82	3.48	3.39	5.12	4.63	4.37
Industrial <sup>2</sup>										
Propane	1.05	1.88	1.48	1.20	3.42	2.43	1.47	4.64	3.31	1.91
Distillate fuel oil	1.86	3.63	3.46	3.42	6.12	5.57	5.35	7.85	7.19	6.82
Residual fuel oil	0.77	2.47	2.35	2.33	4.34	3.95	3.82	5.71	5.21	4.92
Transportation										
Propane	1.58	2.52	2.12	1.85	4.28	3.28	2.35	5.69	4.35	3.00
E85 <sup>3</sup>	2.46	3.37	3.43	3.41	4.57	4.48	4.51	6.59	6.00	5.86
Ethanol wholesale price	2.22	3.59	3.42	3.27	4.23	3.97	3.98	5.13	4.67	4.67
Motor gasoline <sup>4</sup>	2.21	3.69	3.54	3.49	5.88	5.41	5.20	7.57	6.92	6.49
Jet fuel <sup>5</sup>	1.32	3.04	2.89	2.85	5.46	4.89	4.65	7.21	6.53	6.14
Diesel fuel (distillate fuel oil)6	2.31	4.46	4.28	4.24	7.28	6.68	6.46	9.26	8.55	8.18
Residual fuel oil	0.89	2.28	2.12	2.07	4.15	3.70	3.43	5.56	4.95	4.62
Electric power <sup>7</sup>										
Distillate fuel oil	1.64	3.39	3.24	3.22	5.75	5.24	5.05	7.49	6.85	6.49
Residual fuel oil	1.21	2.92	2.79	2.79	4.93	4.55	4.43	6.20	5.73	5.40
Average prices, all sectors <sup>8</sup>										
Propane	1.28	2.14	1.76	1.50	3.73	2.77	1.86	4.98	3.70	2.38
Motor gasoline <sup>4</sup>	2.21	3.69	3.54	3.49	5.88	5.41	5.20	7.57	6.92	6.49
Jet fuel <sup>5</sup>	1.32	3.04	2.89	2.85	5.46	4.89	4.65	7.21	6.53	6.14
Distillate fuel oil	2.20	4.25	4.07	4.03	6.96	6.38	6.16	8.90	8.20	7.83
Residual fuel oil (nominal dollars per barrel)	39	98	91	89	175	157	146	233	208	195
Average	1.87	3.27	3.08	3.01	5.31	4.72	4.41	6.91	6.15	5.62

<sup>&</sup>lt;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 these projections.
<sup>4</sup>Sales weighted-average price for all grades. Includes Federal, State, and local taxes.
<sup>9</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 2016 are model results and may differ from official EIA data reports.

Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a. Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a, and highrt.d120816a.

Table D6. Natural gas supply, disposition, and prices (trillion cubic feet, unless otherwise noted)

(trillori cabic feet, arile	33 01110										
		Projections									
Supply, disposition, and prices	2016	2025			2040			2050			
		Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technolog	
					•	•					
Supply											
Dry gas production <sup>1</sup>	26.53	27.78	33.06	37.41	27.36	37.74	47.89	26.07	40.28	52.83	
Supplemental natural gas <sup>2</sup>	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
Net imports	0.94	-3.14	-4.70	-6.27	-2.87	-5.73	-10.80	-1.14	-5.56	-11.03	
Pipeline <sup>3</sup>	1.03	-0.44	-1.06	-1.49	0.57	-1.35	-2.42	1.67	-1.18	-2.65	
Liquefied natural gas	-0.09	-2.70	-3.65	-4.78	-3.45	-4.38	-8.38	-2.81	-4.38	-8.38	
Total supply	27.52	24.71	28.41	31.20	24.55	32.07	37.16	24.99	34.78	41.86	
Consumption by sector	4.40	4.40	4.05	4.74	4.00	4.54	4.00	4.07	4.55	4.70	
Residential	4.42	4.49	4.65	4.74	4.28	4.54	4.66	4.27	4.55	4.70	
Commercial	3.13	2.95	3.14	3.25	3.03	3.37	3.54	3.27	3.67	3.90	
Industrial <sup>4</sup>	7.70	8.52	8.89	9.04	8.87	9.47	9.64	9.55	10.11	10.27	
Natural gas-to-liquids heat and power <sup>5</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Natural gas-to-liquids production <sup>6</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Electric power <sup>7</sup>	10.11	6.06	8.63	10.62	5.41	11.04	14.56	4.98	12.50	17.78	
Transportation <sup>8</sup>	0.07	0.15	0.16	0.16	0.33	0.37	0.38	0.45	0.52	0.56	
Pipeline fuel	0.67	0.60	0.69	0.76	0.61	0.76	0.92	0.61	0.81	1.02	
Lease and plant fuel <sup>9</sup>	1.56	1.52	1.73	1.96	1.51	1.92	2.45	1.41	2.02	2.64	
Liquefaction for export <sup>10</sup>	0.02	0.28	0.37	0.48	0.35	0.44	0.84	0.29	0.44	0.84	
Total consumption	27.68	24.56	28.25	31.03	24.38	31.91	36.99	24.83	34.62	41.70	
Discrepancy <sup>11</sup>	-0.16	0.15	0.17	0.17	0.16	0.17	0.16	0.17	0.16	0.16	
Natural gas spot price at Henry Hub											
(2016 dollars per million Btu)	2.50	7.12	4.51	3.44	9.76	5.07	3.40	10.30	5.83	3.33	
(nominal dollars per million Btu)	2.50	8.76	5.45	4.14	16.50	8.31	5.56	21.54	11.80	6.76	
Delivered wises											
Delivered prices											
(2016 dollars per thousand cubic feet)	10.22	14.60	11 70	10.50	10.20	12.61	11.00	20.01	1100	12.30	
Residential Commercial	10.22 7.42	14.62 13.28	11.78 10.47	10.50 9.21	18.38 16.45	13.61 11.80	11.90 10.18	20.01 17.76	14.80 12.66	10.32	
Industrial <sup>4</sup>	3.61	8.37	5.66	4.48	10.45	6.12	4.40	11.68	6.79	4.28	
Electric power <sup>7</sup>	3.61	7.60	4.98	3.89	9.95	5.63	4.40	10.60	6.79	4.28	
Transportation <sup>12</sup>	16.97	19.79	16.97	15.84	19.90	15.58	14.06	20.41	16.13	13.96	
Average <sup>13</sup>	5.07	10.16	7.21	5.90	13.01	7.90	6.07	14.08	8.61	5.90	
	5.07	10.16	1.21	5.90	13.01	1.90	0.07	14.08	0.01	5.97	
(nominal dollars per thousand cubic feet) Residential	10.22	17.98	14.26	12.62	31.09	22.31	19.50	41.84	29.95	24.98	
Commercial	7.42	16.33	12.67	11.07	27.81	19.35	16.69	37.12	25.62	20.96	
Industrial <sup>4</sup>	3.61	10.33	6.85	5.38	18.34	19.35	7.22	24.41	13.75	8.69	
Electric power <sup>7</sup>	3.61	9.34	6.02	4.68	16.83	9.23	6.71	22.15	12.84	8.29	
Transportation <sup>12</sup>	16.97	24.33	20.53	19.04	33.65	25.54	23.05	42.15	32.64	28.34	
Average <sup>13</sup>	5.07	24.33 <b>12.49</b>	20.53 <b>8.72</b>	7.09	22.01	12.95	23.05 <b>9.94</b>	29.43	32.64 <b>17.44</b>	20.34 <b>12.1</b> 3	
Average	5.07	12.49	0.12	7.09	22.01	12.93	9.94	29.43	17.44	12.13	

<sup>&</sup>lt;sup>1</sup>Marketed production (wet) minus extraction losses. <sup>2</sup>Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural

<sup>-- =</sup> Not applicable.
Note: Totals may not equal sum of components due to independent rounding. Data for 2016 are model results and may differ from official EIA data reports.

Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a. Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a, and highrt.d120816a.

Table D7 Oil and dae supply

Production and supply		Projections									
	2016	2025				2040			2050		
		Low oil and gas resource and technology	Reference	and	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	Low oil and gas resource and technology	Reference	High oil and gas resource and technology	
- · · ·											
Crude oil Lower 48 average wellhead price <sup>1</sup>											
(2016 dollars per barrel)	43	87	83	75	116	105	90	125	113	94	
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Production (million barrels per day) <sup>2</sup>	0.74	0.04	40.00	40.00	7.00	40.04	40.00	<b>5.70</b>	0.00	47.04	
United States total	8.74	8.61	10.38	13.32	7.03	10.34	16.92	5.76	9.86	17.24	
Lower 48 onshore	6.54	6.85	8.06	10.54	5.33	8.37	13.96	4.53	8.14	14.71	
Tight oil <sup>3</sup>	4.60	4.82	5.91	8.39	3.27	6.30	11.94	2.68	6.23	12.89	
Carbon dioxide enhanced oil	0.30	0.43	0.42	0.39	0.46	0.43	0.39	0.32	0.34	0.27	
Other	1.65	1.59	1.73	1.76	1.60	1.65	1.63	1.53	1.56	1.56	
Lower 48 offshore	1.72	1.21	1.78	1.96	1.22	1.49	1.90	0.93	1.43	1.90	
State	0.07	0.04	0.04	0.05	0.03	0.03	0.03	0.02	0.02	0.03	
Federal	1.65	1.17	1.73	1.92	1.20	1.46	1.87	0.91	1.40	1.87	
Alaska	0.48	0.54	0.54	0.82	0.48	0.47	1.05	0.30	0.30	0.63	
Onshore	0.40	0.38	0.38	0.63	0.25	0.25	0.36	0.17	0.17	0.20	
State offshoreFederal offshore	0.07 0.00	0.16 0.00	0.16 0.00	0.19 0.00	0.20 0.02	0.20 0.02	0.22 0.48	0.12 0.01	0.12 0.01	0.13 0.30	
	0.00	0.00	0.00	0.00	0.02	0.02	0.10	0.01	0.01	0.00	
Natural gas plant liquids production											
(million barrels per day)	0.50	0.04	4.00	5.00	0.44	4.70	0.40	0.00	474	0.00	
United States total	3.53	3.94	4.82	5.38	3.11	4.76	6.13	2.90	4.71	6.33	
Lower 48 onshore	3.09	3.62	4.33	4.78	2.76	4.24	5.43	2.62	4.23	5.63	
Lower 48 offshore	0.41	0.26	0.44	0.52	0.29	0.47	0.59	0.25	0.45	0.64	
Alaska	0.03	0.05	0.05	0.08	0.05	0.05	0.11	0.03	0.03	0.06	
Natural gas											
Natural gas spot price at Henry Hub											
(2016 dollars per million Btu)	2.50	7.12	4.51	3.44	9.76	5.07	3.40	10.30	5.83	3.33	
Dry production (trillion cubic feet)4											
United States total	26.53	27.78	33.06	37.41	27.36	37.74	47.89	26.07	40.28	52.83	
Lower 48 onshore	24.48	26.59	31.32	35.38	24.85	35.79	45.50	23.87	38.43	50.35	
Tight gas	4.67	4.43	4.75	5.26	4.15	5.78	7.07	4.34	6.45	8.32	
Shale gas and tight oil plays <sup>3</sup>	14.08	15.98	20.82	24.46	15.00	25.28	33.91	14.26	27.45	37.99	
Coalbed methane	1.14	1.42	1.05	0.95	1.63	0.87	0.73	1.50	0.79	0.58	
Other	4.59	4.76	4.71	4.71	4.07	3.87	3.78	3.77	3.74	3.45	
Lower 48 offshore	1.75	0.88	1.42	1.68	1.25	1.64	2.03	0.95	1.56	2.16	
State	0.14	0.04	0.04	0.05	0.02	0.02	0.02	0.01	0.02	0.02	
Federal	1.62	0.83	1.38	1.64	1.23	1.62	2.01	0.93	1.54	2.15	
Alaska	0.30	0.31	0.31	0.34	1.26	0.31	0.37	1.25	0.29	0.33	
Supplemental gas supplies <sup>5</sup>											
(trillion cubic feet)	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
Total lower 48 wells drilled (thousands)	30.1	33.5	33.8	37.3	33.7	38.5	41.4	33.0	39.9	39.7	

¹Represents lower 48 onshore and offshore supplies.
²Includes lease condensate.
³Tright oil represents resources in low-permeability reservoirs, including shale and chalk formations. The specific plays included in the tight oil category are Bakken/Three Forks/Sanish, Eagle Ford, Woodford, Austin Chalk, Spraberry, Niobrara, Avalon/Bone Springs, and Monterey.
⁴Marketed production (wet) minus extraction losses.
⁵Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

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Note: Totals may not equal sum of components due to independent rounding. Data for 2016 are model results and may differ from official EIA data reports.

Sources: 2016: EIA, Short-Term Energy Outlook, October 2016 and EIA, AEO2017 National Energy Modeling System run ref2017.d120816a. Projections: EIA, AEO2017 National Energy Modeling System runs lowrt.d120816a, ref2017.d120816a, and #high.resource.