



*Independent Statistics & Analysis*  
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# Working and Net Available Shell Storage Capacity

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With Data as of September 30, 2017



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## **Working and Net Available Shell Storage Capacity**

*Working and Net Available Shell Storage Capacity* is the U.S. Energy Information Administration's (EIA) report containing storage capacity data for crude oil, petroleum products, and selected biofuels. The report includes tables detailing working and net available shell storage capacity by type of facility, product, and Petroleum Administration for Defense District (PAD District). Net available shell storage capacity is broken down further to show the percent for exclusive use by facility operators and the percent leased to others. Crude oil storage capacity data are also provided for Cushing, Oklahoma, an important crude oil market center. Data are released twice each year near the end of May (data for March 31) and near the end of November (data for September 30).

In addition to storage capacity, the report includes stocks of crude oil, petroleum products, and selected biofuels. Storage capacity utilization rates are calculated as stocks divided by storage capacity. Storage capacity utilization rates are reported for refineries, bulk terminals and fuel ethanol plants, and crude oil tank farms.

Crude oil tank farm storage capacity includes capacity of tanks and underground caverns but excludes pipeline fill capacity. Stocks reported monthly are a combination of barrels held in tank farms and pipeline fill. March and September reports include stocks held in tank farms without pipeline fill. Stocks held in tank farms are used for calculating the tank farm storage capacity utilization rate.

**Table 1. Working Storage Capacity by PAD District as of September 30, 2017**  
(Thousand Barrels)

Commodity	PAD Districts					U.S. Total	Ending Stocks	Utilization Rate <sup>1</sup>
	1	2	3	4	5			
<b>Refineries</b>								
Crude Oil <sup>2</sup>	13,266	19,108	71,222	4,384	36,353	144,333	96,811	67%
Fuel Ethanol	150	174	310	117	35	786	605	77%
Hydrocarbon Gas Liquids <sup>3</sup>	1,178	10,635	29,897	420	2,131	44,261	18,795	42%
Propane/Propylene (dedicated) <sup>4</sup>	404	3,546	4,604	57	194	8,805	5,263	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	8,615	27,634	51,218	6,677	26,838	120,982	70,046	58%
Distillate Fuel Oil	4,447	12,725	29,179	3,940	9,609	59,900	30,564	51%
Kerosene and Kerosene-type Jet Fuel	1,124	3,799	10,517	556	6,578	22,574	13,081	58%
Residual Fuel Oil	1,485	2,624	9,233	797	5,769	19,908	8,700	44%
Asphalt and Road Oil	1,083	8,755	4,429	2,027	1,346	17,640	8,545	48%
All Other <sup>5</sup>	14,157	29,509	87,411	7,452	35,707	174,236	95,320	55%
Total <sup>6</sup>	45,505	114,963	293,416	26,370	124,366	604,620	342,467	57%
<b>Bulk Terminals (Including Fuel Ethanol Plants)<sup>7</sup></b>								
Fuel Ethanol	12,785	14,897	6,513	409	4,341	38,945	20,831	53%
Hydrocarbon Gas Liquids <sup>3</sup>	12,969	61,148	334,830	6,190	7,649	422,786	171,090	40%
Propane/Propylene (dedicated) <sup>4</sup>	8,741	27,618	112,075	1,023	3,292	152,749	58,537	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	83,440	51,172	61,304	4,040	23,883	223,839	106,188	47%
Distillate Fuel Oil	82,016	34,652	38,093	2,589	14,013	171,363	78,368	46%
Kerosene and Kerosene-type Jet Fuel	13,556	6,772	8,018	583	7,773	36,702	18,377	50%
Residual Fuel Oil	17,328	917	37,205	-	4,922	60,372	27,175	45%
Asphalt and Road Oil	12,938	14,241	5,781	2,154	4,490	39,604	13,563	34%
All Other <sup>8</sup>	7,761	3,632	20,840	7	5,111	37,351	14,808	40%
Total	242,793	187,431	512,584	15,972	72,182	1,030,962	450,400	44%
<b>Crude Oil Tank Farms (excludes pipeline fill)<sup>2</sup></b>								
Crude Oil (Excluding SPR)	8,648	154,169	268,282	20,186	27,703	478,988	253,961	53%
Cushing, Oklahoma	--	78,194	--	--	--	78,194	60,741	78%
<b>Strategic Petroleum Reserve</b>								
	-	-	713,500	-	-	713,500	672,714	94%

<sup>1</sup> Utilization rate for refineries, bulk terminals and fuel ethanol plants equals stocks divided by storage capacity.

Utilization rates for crude tank farms equals stocks divided by storage capacity of tanks and underground caverns. It does not include pipeline fill.

<sup>2</sup> See <http://www.eia.gov/petroleum/storagecapacity/crudeoilstorage.xls> for additional information on crude oil stocks and storage capacity.

<sup>3</sup> Includes storage capacity for ethane, propane, propylene, normal butane, butylene, isobutane, isobutylene, and natural gasoline stored separately or in mixes.

<sup>4</sup> Dedicated Propane/Propylene storage capacity includes storage capacity for propane and propylene stored separately. It excludes capacity for storing propane and propylene as a component of mixed hydrocarbon gas liquids. Ending stocks are provided for comparison, but storage capacity utilization is not calculated because ending stocks include propane and propylene stored in mixes as well as in dedicated storage.

<sup>5</sup> All Other storage capacity at refineries includes oxygenates and renewable fuels (except fuel ethanol), other hydrocarbons, unfinished oils, aviation gasoline, aviation gasoline blending components, special naphthas, lubricants, petrochemical feedstocks, wax, and miscellaneous products.

<sup>6</sup> Excludes petroleum coke.

<sup>7</sup> Includes ending stocks of fuel ethanol at ethanol plants. Excludes ending stocks of natural gasoline, MTBE, ETBE, other oxygenates, finished motor gasoline and motor gasoline blending components at fuel ethanol plants.

<sup>8</sup> All Other storage capacity at terminals includes oxygenates and renewable fuels (except fuel ethanol), unfinished oils, aviation gasoline, aviation gasoline blending components, special naphthas, lubricants, and miscellaneous products.

Source: Energy Information Administration, Form EIA-810 "Monthly Refinery Report", Form EIA-813 "Monthly Crude Oil Report", Form EIA-815 "Monthly Bulk Terminal and Blender Report", Form EIA-819 "Monthly Oxygenate Report"

**Table 2. Net Available Shell Storage Capacity by PAD District as of September 30, 2017**  
(Thousand Barrels)

Commodity	PAD Districts										U.S. Total	
	1		2		3		4		5			
	In Operation	Idle <sup>1</sup>	In Operation	Idle <sup>1</sup>	In Operation	Idle <sup>1</sup>	In Operation	Idle <sup>1</sup>	In Operation	Idle <sup>1</sup>	In Operation	Idle <sup>1</sup>
<b>Refineries</b>												
Crude Oil <sup>2</sup>	15,070	672	23,615	1,210	86,256	2,494	4,938	205	41,435	300	171,314	4,881
Fuel Ethanol	179	-	222	4	354	22	140	-	41	9	936	35
Hydrocarbon Gas Liquids <sup>3</sup>	1,327	22	11,773	361	34,443	281	454	-	2,269	8	50,266	672
Propane/Propylene (dedicated) <sup>4</sup>	450	2	3,945	105	5,634	181	63	-	209	5	10,301	293
Motor Gasoline (incl. Motor Gasoline Blending Components)	9,867	1,975	32,242	798	62,153	2,061	7,713	211	30,253	69	142,228	5,114
Distillate Fuel Oil	5,041	1,113	14,191	709	33,669	356	4,336	69	10,727	265	67,964	2,512
Kerosene and Kerosene-type Jet Fuel	1,220	94	4,301	262	12,770	576	617	-	7,444	529	26,352	1,461
Residual Fuel Oil	1,686	165	3,067	131	12,125	720	862	134	6,345	10	24,085	1,160
Asphalt and Road Oil	1,259	-	9,821	803	5,022	18	2,212	76	1,426	343	19,740	1,240
All Other <sup>5</sup>	15,819	660	33,194	944	102,753	3,709	8,308	28	40,312	1,778	200,386	7,119
Total <sup>6</sup>	51,468	4,701	132,426	5,222	349,545	10,237	29,580	723	140,252	3,311	703,271	24,194
<b>Bulk Terminals (Including Fuel Ethanol Plants)</b>												
Fuel Ethanol	14,624	85	17,226	76	7,387	6	494	3	5,014	29	44,745	199
Hydrocarbon Gas Liquids <sup>3</sup>	14,042	2	71,569	751	367,446	4,107	6,732	-	8,119	186	467,908	5,046
Propane/Propylene (dedicated) <sup>4</sup>	9,514	1	31,545	339	121,471	3,291	1,112	-	3,660	186	167,302	3,817
Motor Gasoline (incl. Motor Gasoline Blending Components)	95,028	1,470	60,400	623	71,579	1,939	4,818	-	27,726	191	259,551	4,223
Distillate Fuel Oil	88,937	3,047	38,960	600	43,511	302	2,994	-	15,631	13	190,033	3,962
Kerosene and Kerosene-type Jet Fuel	15,130	22	7,726	-	9,048	40	697	-	8,694	87	41,295	149
Residual Fuel Oil	18,628	1,290	1,000	-	39,221	722	-	-	5,339	458	64,188	2,470
Asphalt and Road Oil	13,781	151	15,234	312	6,443	34	2,254	-	4,951	116	42,663	613
All Other <sup>7</sup>	8,643	890	3,998	101	22,625	120	8	-	5,697	18	40,971	1,129
Total	268,813	6,957	216,113	2,463	567,260	7,270	17,997	3	81,171	1,098	1,151,354	17,791
<b>Crude Oil Tank Farms (excludes pipeline fill)<sup>2</sup></b>												
Crude Oil (Excluding SPR)	10,180	337	182,111	4,129	309,049	9,799	24,962	317	34,509	517	560,811	15,099
Cushing, Oklahoma	--	--	91,560	896	--	--	--	--	--	--	91,560	896
Strategic Petroleum Reserve	-	-	-	-	713,500	-	-	-	-	-	713,500	-

<sup>1</sup> Idle tanks and caverns are those that were not capable of being used to hold stocks on the report date, but could be placed in operation within 90 days of the report date after maintenance or repair.

<sup>2</sup> See <http://www.eia.gov/petroleum/storagecapacity/crudeoilstorage.xls> for additional information on crude oil stocks and storage capacity.

<sup>3</sup> Includes storage capacity for ethane, propane, propylene, normal butane, butylene, isobutane, isobutylene, and natural gasoline stored separately or in mixes.

<sup>4</sup> Dedicated Propane/Propylene storage capacity includes storage capacity for propane and propylene stored separately. It excludes the propane component of mixed hydrocarbon gas liquids storage.

<sup>5</sup> All Other storage capacity at refineries includes oxygenates and renewable fuels (except fuel ethanol), other hydrocarbons, unfinished oils, aviation gasoline, aviation gasoline blending components, special naphthas, lubricants, petrochemical feedstocks, wax, and miscellaneous products.

<sup>6</sup> Excludes petroleum coke.

<sup>7</sup> All Other storage capacity at terminals includes oxygenates and renewable fuels (except fuel ethanol), unfinished oils, aviation gasoline, aviation gasoline blending components, special naphthas, lubricants, and miscellaneous products.

Source: Energy Information Administration, Form EIA-810 "Monthly Refinery Report", Form EIA-813 "Monthly Crude Oil Report", Form EIA-815 "Monthly Bulk Terminal and Blender Report" Form EIA-819 "Monthly Oxygenate Report"

**Table 3. Net Available Shell Storage Capacity of Terminals and Tank Farms as of September 30, 2017**  
(Thousand Barrels, Except Where Noted)

Commodity	PAD Districts					U.S. Total
	1	2	3	4	5	
<b>Crude Oil (Excluding SPR)</b>						
Capacity In Operation	10,180	182,111	309,049	24,962	34,509	560,811
Percent Exclusive Use <sup>2</sup>	66%	43%	64%	86%	75%	59%
Percent Leased to Others	34%	57%	36%	14%	25%	41%
<b>Cushing, Oklahoma</b>						
Capacity In Operation	--	91,560	--	--	--	91,560
Percent Exclusive Use <sup>2</sup>	--	11%	--	--	--	11%
Percent Leased to Others	--	89%	--	--	--	89%
<b>Fuel Ethanol</b>						
Capacity In Operation	14,375	6,741	6,987	376	4,818	33,297
Percent Exclusive Use <sup>2</sup>	62%	49%	41%	78%	60%	55%
Percent Leased to Others	38%	51%	59%	22%	40%	45%
<b>Hydrocarbon Gas Liquids<sup>3</sup></b>						
Capacity In Operation	14,042	71,569	367,446	6,732	8,119	467,908
Percent Exclusive Use <sup>2</sup>	72%	22%	16%	0%	63%	19%
Percent Leased to Others	28%	78%	84%	100%	37%	81%
<b>Propane/Propylene (dedicated)<sup>4</sup></b>						
Capacity In Operation	9,514	31,545	121,471	1,112	3,660	167,302
Percent Exclusive Use <sup>2</sup>	81%	19%	15%	0%	57%	20%
Percent Leased to Others	19%	81%	85%	100%	43%	80%
<b>Motor Gasoline (incl. Motor Gasoline Blending Components)</b>						
Capacity In Operation	95,028	60,400	71,579	4,818	27,726	259,551
Percent Exclusive Use <sup>2</sup>	56%	70%	23%	72%	49%	50%
Percent Leased to Others	44%	30%	77%	28%	51%	50%
<b>Distillate Fuel Oil</b>						
Capacity In Operation	88,937	38,960	43,511	2,994	15,631	190,033
Percent Exclusive Use <sup>2</sup>	59%	62%	41%	76%	49%	55%
Percent Leased to Others	41%	38%	59%	24%	51%	45%
<b>Kerosene and Kerosene-type Jet Fuel</b>						
Capacity In Operation	15,130	7,726	9,048	697	8,694	41,295
Percent Exclusive Use <sup>2</sup>	52%	61%	15%	25%	46%	44%
Percent Leased to Others	48%	39%	85%	75%	54%	56%
<b>Residual Fuel Oil</b>						
Capacity In Operation	18,628	1,000	39,221	-	5,339	64,188
Percent Exclusive Use <sup>2</sup>	26%	51%	4%	-	27%	13%
Percent Leased to Others	74%	49%	96%	-	73%	87%
<b>Asphalt and Road Oil</b>						
Capacity In Operation	13,781	15,234	6,443	2,254	4,951	42,663
Percent Exclusive Use <sup>2</sup>	47%	76%	50%	62%	78%	62%
Percent Leased to Others	53%	24%	50%	38%	22%	38%
<b>All Other<sup>5</sup></b>						
Capacity In Operation	8,643	3,998	22,625	8	5,697	40,971
Percent Exclusive Use <sup>2</sup>	38%	62%	11%	75%	64%	29%
Percent Leased to Others	62%	38%	89%	25%	36%	71%
<b>Total</b>						
Capacity In Operation	278,744	387,739	875,909	42,841	115,484	1,700,717
Percent Exclusive Use <sup>2</sup>	55%	47%	35%	68%	59%	43%
Percent Leased to Others	45%	53%	65%	32%	41%	57%

<sup>1</sup> Includes storage capacity of terminals and tank farms. Excludes storage capacity of refineries, fuel ethanol plants, and pipelines.

<sup>2</sup> Percent exclusive use is that portion of capacity in operation that is for the exclusive use of the operating company.

<sup>3</sup> Includes storage capacity for ethane, propane, propylene, normal butane, butylene, isobutane, isobutylene, and natural gasoline stored separately or in mixes.

<sup>4</sup> Dedicated Propane/Propylene storage capacity includes storage capacity for propane and propylene stored separately.

It excludes the propane component of mixed hydrocarbon gas liquids storage.

<sup>5</sup> All Other storage capacity at terminals includes oxygenates and renewable fuels (except fuel ethanol), unfinished oils, aviation gasoline, aviation gasoline blending components, special naphthas, lubricants, and miscellaneous products.

Source: Energy Information Administration, Form EIA-813 "Monthly Crude Oil Report", Form EIA-815 "Monthly Bulk Terminal and Blender Report"