



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

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With Data as of March 31, 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 March 31, 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>	15,156	20,209	74,428	4,202	37,250	151,245	105,503	70%
Fuel Ethanol	151	137	312	117	55	772	609	79%
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>3</sup>	1,178	10,662	30,391	410	2,083	44,724	14,453	32%
Propane/Propylene (dedicated) <sup>4</sup>	404	3,482	4,633	48	201	8,768	3,160	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	8,715	27,463	51,373	6,827	27,842	122,220	69,618	57%
Distillate Fuel Oil	4,963	13,522	28,836	4,102	10,043	61,466	31,494	51%
Kerosene and Kerosene-type Jet Fuel	1,113	3,997	11,013	678	7,106	23,907	12,268	51%
Residual Fuel Oil	1,321	2,922	8,469	758	6,704	20,174	8,161	40%
Asphalt and Road Oil	2,062	8,755	4,598	1,881	2,071	19,367	9,914	51%
All Other <sup>5</sup>	14,564	28,955	87,563	6,500	36,377	173,959	96,051	55%
Total <sup>6</sup>	49,223	116,622	296,983	25,475	129,531	617,834	348,071	56%
<b>Bulk Terminals (Including Fuel Ethanol Plants)<sup>7</sup></b>								
Fuel Ethanol	12,851	14,759	6,730	413	4,295	39,048	23,147	59%
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	12,443	58,590	336,665	6,190	7,623	421,511	98,494	23%
Propane/Propylene (dedicated) <sup>4</sup>	8,223	26,614	113,484	1,023	3,289	152,633	27,927	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	84,245	50,890	60,403	4,057	24,573	224,168	123,340	55%
Distillate Fuel Oil	81,559	34,353	37,908	2,589	12,748	169,157	90,317	53%
Kerosene and Kerosene-type Jet Fuel	12,858	6,595	7,924	583	7,666	35,626	19,561	55%
Residual Fuel Oil	16,621	835	37,124	-	3,909	58,489	32,607	56%
Asphalt and Road Oil	11,387	14,573	6,228	2,155	3,830	38,173	20,944	55%
All Other <sup>8</sup>	7,857	4,145	22,663	7	4,421	39,093	16,763	43%
Total	239,821	184,740	515,645	15,994	69,065	1,025,265	425,173	41%
<b>Crude Oil Tank Farms (excludes pipeline fill)<sup>2</sup></b>								
Crude Oil (Excluding SPR)	8,986	153,100	260,274	20,633	27,143	470,136	322,021	68%
Cushing, Oklahoma	--	76,726	--	--	--	76,726	67,491	88%
Strategic Petroleum Reserve	-	-	727,000	-	-	727,000	691,060	95%

<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, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus 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 natural gas plant liquids and liquefied refinery gases. 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 pentanes plus, 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, wax, 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 March 31, 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>	17,165	672	24,492	491	89,257	2,932	4,760	205	42,409	224	178,083	4,524
Fuel Ethanol	174	-	167	4	353	4	140	-	62	9	896	17
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>3</sup>	1,327	22	11,808	365	35,042	115	444	7	2,215	53	50,836	562
Propane/Propylene (dedicated) <sup>4</sup>	450	2	3,875	1	5,653	1	52	6	215	-	10,245	10
Motor Gasoline (incl. Motor Gasoline Blending Components)	9,908	1,966	31,895	1,136	62,812	1,961	7,940	204	31,316	276	143,871	5,543
Distillate Fuel Oil	5,675	1,039	15,014	311	33,279	518	4,469	49	11,056	205	69,493	2,122
Kerosene and Kerosene-type Jet Fuel	1,220	145	4,477	138	13,233	260	745	44	8,004	242	27,679	829
Residual Fuel Oil	1,498	165	3,371	224	10,261	678	886	2	7,314	97	23,330	1,166
Asphalt and Road Oil	2,277	-	9,785	813	5,109	132	2,077	84	2,183	335	21,431	1,364
All Other <sup>5</sup>	16,266	605	32,402	975	102,920	3,040	7,215	102	40,966	1,234	199,769	5,956
Total <sup>6</sup>	55,510	4,614	133,411	4,457	352,266	9,640	28,676	697	145,525	2,675	715,388	22,083
<b>Bulk Terminals (Including Fuel Ethanol Plants)</b>												
Fuel Ethanol	14,718	124	17,055	12	7,553	59	497	3	4,874	42	44,697	240
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>3</sup>	13,436	2	68,552	1,760	371,975	6,048	6,732	-	8,097	186	468,792	7,996
Propane/Propylene (dedicated) <sup>4</sup>	8,918	1	30,359	1,131	123,913	4,082	1,112	-	3,657	186	167,959	5,400
Motor Gasoline (incl. Motor Gasoline Blending Components)	95,353	1,494	59,928	1,153	70,205	1,550	4,800	-	28,441	198	258,727	4,395
Distillate Fuel Oil	88,038	1,668	38,652	678	42,302	756	2,982	-	14,137	13	186,111	3,115
Kerosene and Kerosene-type Jet Fuel	14,334	59	7,501	15	8,760	40	687	-	8,585	64	39,867	178
Residual Fuel Oil	17,833	385	918	58	38,992	458	-	-	4,244	663	61,987	1,564
Asphalt and Road Oil	12,167	154	15,538	360	6,858	40	2,255	-	4,250	20	41,068	574
All Other <sup>7</sup>	8,686	667	4,657	101	24,754	147	8	-	5,048	18	43,153	933
Total	264,565	4,553	212,801	4,137	571,399	9,098	17,961	3	77,676	1,204	1,144,402	18,995
<b>Crude Oil Tank Farms (excludes pipeline fill)<sup>2</sup></b>												
Crude Oil (Excluding SPR)	10,443	137	180,331	4,228	301,269	7,523	25,845	168	33,879	433	551,767	12,489
Cushing, Oklahoma	--	--	90,125	1,044	--	--	--	--	--	--	90,125	1,044
Strategic Petroleum Reserve	-	-	-	-	727,000	-	-	-	-	-	727,000	-

<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, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus 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 natural gas plant liquids and liquefied refinery gases 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, wax, 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 March 31, 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	10,443	180,331	301,269	25,845	33,879	551,767
Percent Exclusive Use <sup>2</sup>	60%	43%	65%	87%	73%	60%
Percent Leased to Others	40%	57%	35%	13%	27%	40%
<b>Cushing, Oklahoma</b>						
Capacity In Operation	--	90,125	--	--	--	90,125
Percent Exclusive Use <sup>2</sup>	--	11%	--	--	--	11%
Percent Leased to Others	--	89%	--	--	--	89%
<b>Fuel Ethanol</b>						
Capacity In Operation	14,496	6,577	7,153	379	4,678	33,283
Percent Exclusive Use <sup>2</sup>	62%	49%	40%	78%	60%	54%
Percent Leased to Others	38%	51%	60%	22%	40%	46%
<b>Natural Gas Plant Liquids and Liquefied Refinery Gases<sup>3</sup></b>						
Capacity In Operation	13,436	68,552	371,975	6,732	8,097	468,792
Percent Exclusive Use <sup>2</sup>	71%	22%	17%	0%	63%	20%
Percent Leased to Others	29%	78%	83%	100%	37%	80%
<b>Propane/Propylene (dedicated)<sup>4</sup></b>						
Capacity In Operation	8,918	30,359	123,913	1,112	3,657	167,959
Percent Exclusive Use <sup>2</sup>	80%	20%	15%	0%	57%	20%
Percent Leased to Others	20%	80%	85%	100%	43%	80%
<b>Motor Gasoline (incl. Motor Gasoline Blending Components)</b>						
Capacity In Operation	95,353	59,928	70,205	4,800	28,441	258,727
Percent Exclusive Use <sup>2</sup>	58%	70%	28%	72%	47%	52%
Percent Leased to Others	42%	30%	72%	28%	53%	48%
<b>Distillate Fuel Oil</b>						
Capacity In Operation	88,038	38,652	42,302	2,982	14,137	186,111
Percent Exclusive Use <sup>2</sup>	58%	61%	45%	75%	47%	55%
Percent Leased to Others	42%	39%	55%	25%	53%	45%
<b>Kerosene and Kerosene-type Jet Fuel</b>						
Capacity In Operation	14,334	7,501	8,760	687	8,585	39,867
Percent Exclusive Use <sup>2</sup>	50%	60%	21%	24%	46%	44%
Percent Leased to Others	50%	40%	79%	76%	54%	56%
<b>Residual Fuel Oil</b>						
Capacity In Operation	17,833	918	38,992	-	4,244	61,987
Percent Exclusive Use <sup>2</sup>	28%	55%	3%	-	23%	13%
Percent Leased to Others	72%	45%	97%	-	77%	87%
<b>Asphalt and Road Oil</b>						
Capacity In Operation	12,167	15,538	6,858	2,255	4,250	41,068
Percent Exclusive Use <sup>2</sup>	41%	75%	47%	62%	75%	59%
Percent Leased to Others	59%	25%	53%	38%	25%	41%
<b>All Other<sup>5</sup></b>						
Capacity In Operation	8,686	4,657	24,754	8	5,048	43,153
Percent Exclusive Use <sup>2</sup>	41%	53%	6%	75%	59%	24%
Percent Leased to Others	59%	47%	94%	25%	41%	76%
<b>Total</b>						
Capacity In Operation	274,786	382,654	872,268	43,688	111,359	1,684,755
Percent Exclusive Use <sup>2</sup>	55%	47%	35%	69%	57%	44%
Percent Leased to Others	45%	53%	65%	31%	43%	56%

<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, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus 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 natural gas plant liquids and liquefied refinery gases 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, wax, and miscellaneous products.

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