

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, product pipelines, and crude oil tank farms.

Product pipeline storage capacities are limited to capacity of working and breakout tanks and underground caverns used for pipeline operations. Product pipeline storage capacity excludes capacity of actual pipelines. Stocks reported by pipeline operators include barrels held in pipelines (pipeline fill) as well as barrels held in tanks and underground caverns used for pipeline operations. March and September reports from pipeline operators include stocks held in tanks and underground caverns without pipeline fill. Stocks held in tanks and underground caverns are used to calculate utilization rates for pipeline storage capacity.

The situation of storage capacity at crude oil tank farms and tank farm stocks of crude oil is similar to product pipeline storage capacity and stocks. 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, 2012
(Thousand Barrels)

Commodity	PAD Districts					U.S. Total	Ending Stocks	Utilization Rate ¹
	1	2	3	4	5			
Refineries								
Crude Oil	17,564	19,123	72,430	4,280	37,340	150,737	96,239	64%
Fuel Ethanol	243	95	201	99	69	707	466	66%
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	2,851	9,590	24,778	545	2,296	40,060	12,839	32%
Propane/Propylene (dedicated) ³	612	3,008	3,914	160	209	7,903	2,876	36%
Motor Gasoline (incl. Motor Gasoline Blending Components)	12,664	27,517	56,563	6,687	27,193	130,624	73,082	56%
Distillate Fuel Oil	10,357	15,175	28,385	3,591	9,740	67,248	31,914	47%
Kerosene and Kerosene-type Jet Fuel	2,054	3,719	10,120	612	7,028	23,533	12,894	55%
Residual Fuel Oil	2,131	3,282	9,367	549	5,941	21,270	9,052	43%
Asphalt and Road Oil	2,088	8,303	4,718	2,130	2,937	20,176	9,980	49%
All Other ⁴	16,918	29,323	93,098	6,577	38,272	184,188	96,569	52%
Total ⁵	66,870	116,127	299,660	25,070	130,816	638,543	343,035	54%
Bulk Terminals (Including Fuel Ethanol Plants)⁶								
Fuel Ethanol	13,949	14,006	6,389	407	4,142	38,893	22,460	58%
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	8,510	56,272	277,019	55	8,173	350,029	78,442	22%
Propane/Propylene (dedicated) ³	6,959	24,403	74,833	28	2,847	109,070	33,549	31%
Motor Gasoline (incl. Motor Gasoline Blending Components)	74,183	50,283	54,634	3,930	23,890	206,920	94,316	46%
Distillate Fuel Oil	81,344	34,814	35,575	2,495	14,433	168,661	72,382	43%
Kerosene and Kerosene-type Jet Fuel	12,487	6,498	6,078	465	8,037	33,565	15,096	45%
Residual Fuel Oil	23,247	1,120	32,639	-	4,206	61,212	27,228	44%
Asphalt and Road Oil	10,724	13,889	4,054	2,068	3,133	33,868	15,738	46%
All Other ⁷	11,582	4,255	15,545	58	1,621	33,061	11,602	35%
Total	236,026	181,137	431,933	9,478	67,635	926,209	337,264	36%
Product Pipelines								
Fuel Ethanol	-	-	-	-	-	-	-	-
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	474	3,297	2,772	-	-	6,543	2,001	31%
Propane/Propylene (dedicated) ³	-	1,826	745	-	-	2,571	625	24%
Motor Gasoline (incl. Motor Gasoline Blending Components)	14,998	9,578	14,452	471	2,546	42,045	15,333	36%
Distillate Fuel Oil	10,950	6,115	12,195	450	1,182	30,892	9,875	32%
Kerosene and Kerosene-type Jet Fuel	4,341	2,768	5,172	12	733	13,026	4,233	32%
All Other ⁸	313	169	125	19	3	629	226	36%
Total	31,076	21,927	34,716	952	4,464	93,135	31,668	34%
Crude Tank Farms								
Crude Oil (Excluding SPR)	2,897	100,313	183,552	10,417	27,279	324,458	166,561	51%
Cushing, Oklahoma	--	61,928	--	--	--	61,928	39,551	64%
Strategic Petroleum Reserve								
	-	-	727,000	-	-	727,000	695,018	96%

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

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

² Includes storage capacity for ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus stored separately or in mixes.

³ 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.

⁴ 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.

⁵ Excludes petroleum coke.

⁶ 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.

⁷ 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.

⁸ All Other storage capacity at pipelines includes oxygenates and renewable fuels (except fuel ethanol), aviation gasoline, residual fuel oil and miscellaneous products.

Table 2. Net Available Shell Storage Capacity by PAD District as of March 31, 2012
(Thousand Barrels)

Commodity	PAD Districts										U.S. Total		
	1		2		3		4		5		In Operation	Idle ¹	
	In Operation	Idle ¹	In Operation	Idle ¹	In Operation	Idle ¹	In Operation	Idle ¹	In Operation	Idle ¹			
Refineries													
Crude Oil	20,571	1,957	22,459	314	86,587	3,296	4,790	130	42,113	1,610	176,520	7,307	
Fuel Ethanol	280	-	115	5	220	-	114	3	79	-	808	8	
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	3,222	9	10,302	9	28,679	214	597	17	2,502	7	45,302	256	
Propane/Propylene (dedicated) ³	700	7	3,224	4	4,001	4	175	12	242	-	8,342	27	
Motor Gasoline (incl. Motor Gasoline Blending Components)	15,540	1,635	31,490	454	66,319	2,160	7,642	156	31,247	785	152,238	5,190	
Distillate Fuel Oil	11,367	904	16,470	527	32,187	834	3,905	122	10,804	35	74,733	2,422	
Kerosene and Kerosene-type Jet Fuel	2,290	82	4,098	112	11,710	410	673	5	8,016	163	26,787	772	
Residual Fuel Oil	2,428	743	3,690	65	11,264	351	603	4	6,637	15	24,622	1,178	
Asphalt and Road Oil	2,291	30	9,220	192	5,214	298	2,366	16	3,123	326	22,214	862	
All Other ⁴	19,124	899	32,777	1,036	105,346	5,927	7,318	405	43,480	1,428	208,045	9,695	
Total ⁵	77,113	6,259	130,621	2,714	347,526	13,490	28,008	858	148,001	4,369	731,269	27,690	
Bulk Terminals (Including Fuel Ethanol Plants)													
Fuel Ethanol	16,105	76	16,110	64	7,175	366	457	7	4,751	23	44,598	536	
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	9,068	6	65,940	3,287	323,893	4,702	65	-	8,729	-	407,695	7,995	
Propane/Propylene (dedicated) ³	7,484	4	27,971	2,047	86,742	-	36	-	3,043	-	125,276	2,051	
Motor Gasoline (incl. Motor Gasoline Blending Components)	83,940	1,521	59,343	573	62,563	128	4,427	18	27,584	650	237,857	2,890	
Distillate Fuel Oil	91,258	2,221	38,992	651	40,829	590	2,753	11	16,475	268	190,307	3,741	
Kerosene and Kerosene-type Jet Fuel	14,605	452	7,195	10	6,560	26	541	-	8,881	5	37,782	493	
Residual Fuel Oil	24,975	737	1,202	224	33,828	33	-	-	4,923	63	64,928	1,057	
Asphalt and Road Oil	11,507	291	14,867	474	4,579	37	2,249	-	3,444	25	36,646	827	
All Other ⁶	13,160	559	4,666	374	16,500	420	81	10	1,991	25	36,398	1,388	
Total	264,618	5,863	208,315	5,657	495,927	6,302	10,573	46	76,778	1,059	1,056,211	18,927	
Product Pipelines													
Fuel Ethanol	-	-	-	-	-	-	-	-	-	-	-	-	
Natural Gas Plant Liquids and Liquefied Refinery Gases ²	481	-	3,554	-	2,950	-	-	-	-	-	6,985	-	
Propane/Propylene (dedicated) ³	-	-	1,901	-	776	-	-	-	-	-	2,677	-	
Motor Gasoline (incl. Motor Gasoline Blending Components)	17,710	782	10,814	463	21,594	525	515	-	3,018	89	53,651	1,859	
Distillate Fuel Oil	11,937	708	6,839	170	16,611	471	511	-	1,577	-	37,475	1,349	
Kerosene and Kerosene-type Jet Fuel	5,411	-	3,043	57	6,553	134	13	-	920	-	15,940	191	
All Other ⁷	330	-	177	-	132	-	20	2	4	-	663	2	
Total	35,869	1,490	24,427	690	47,840	1,130	1,059	2	5,519	89	114,714	3,401	
Crude Tank Farms													
Crude Oil (Excluding SPR)	3,396	-	121,628	1,502	206,178	3,850	12,811	228	33,267	1,103	377,280	6,683	
Cushing, Oklahoma	--	--	74,596	250	--	--	--	--	--	--	74,596	250	
Strategic Petroleum Reserve	-	-	-	-	727,000	-	-	-	-	-	727,000	-	

¹ 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.

² Includes storage capacity for ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus stored separately or in mixes.

³ 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.

⁴ 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.

⁵ Excludes petroleum coke.

⁶ 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.

⁷ All Other storage capacity at pipelines includes oxygenates and renewable fuels (except fuel ethanol), aviation gasoline, residual fuel oil and miscellaneous products.

Source: Energy Information Administration, Form EIA-810 "Monthly Refinery Report", Form EIA-812 "Monthly Product Pipeline 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, 2012¹
(Thousand Barrels, Except Where Noted)

Commodity	PAD Districts					U.S. Total
	1	2	3	4	5	
Crude Oil (Excluding SPR)						
Capacity In Operation	3,396	121,628	206,178	12,811	33,267	377,280
Percent Exclusive Use ²	94%	59%	79%	91%	77%	72%
Percent Leased to Others	6%	41%	21%	9%	23%	28%
Cushing, Oklahoma						
Capacity In Operation	--	74,596	--	--	--	74,596
Percent Exclusive Use ²	--	43%	--	--	--	43%
Percent Leased to Others	--	57%	--	--	--	57%
Fuel Ethanol						
Capacity In Operation	15,901	6,604	6,690	327	4,555	34,077
Percent Exclusive Use ²	62%	52%	41%	92%	66%	57%
Percent Leased to Others	38%	48%	59%	8%	34%	43%
Natural Gas Plant Liquids and Liquefied Refinery Gases³						
Capacity In Operation	9,068	65,940	323,893	65	8,729	407,695
Percent Exclusive Use ²	63%	22%	11%	100%	58%	15%
Percent Leased to Others	37%	78%	89%	0%	42%	85%
Propane/Propylene (dedicated)⁴						
Capacity In Operation	7,484	27,971	86,742	36	3,043	125,276
Percent Exclusive Use ²	76%	19%	8%	100%	55%	16%
Percent Leased to Others	24%	81%	92%	0%	45%	84%
Motor Gasoline (incl. Motor Gasoline Blending Components)						
Capacity In Operation	83,940	59,343	62,563	4,427	27,584	237,857
Percent Exclusive Use ²	63%	74%	30%	90%	50%	56%
Percent Leased to Others	37%	26%	70%	10%	50%	44%
Distillate Fuel Oil						
Capacity In Operation	91,258	38,992	40,829	2,753	16,475	190,307
Percent Exclusive Use ²	61%	64%	32%	89%	47%	55%
Percent Leased to Others	39%	36%	68%	11%	53%	45%
Kerosene and Kerosene-type Jet Fuel						
Capacity In Operation	14,605	7,195	6,560	541	8,881	37,782
Percent Exclusive Use ²	56%	73%	25%	29%	45%	51%
Percent Leased to Others	44%	27%	75%	71%	55%	49%
Residual Fuel Oil						
Capacity In Operation	24,975	1,202	33,828	-	4,923	64,928
Percent Exclusive Use ²	41%	60%	4%	-	28%	21%
Percent Leased to Others	59%	40%	96%	-	72%	79%
Asphalt and Road Oil						
Capacity In Operation	11,507	14,867	4,579	2,249	3,444	36,646
Percent Exclusive Use ²	38%	77%	73%	62%	76%	63%
Percent Leased to Others	62%	23%	27%	38%	24%	37%
All Other⁵						
Capacity In Operation	13,160	4,666	16,500	81	1,991	36,398
Percent Exclusive Use ²	42%	70%	10%	99%	62%	32%
Percent Leased to Others	58%	30%	90%	1%	38%	68%
Total						
Capacity In Operation	267,810	320,437	701,620	23,254	109,849	1,422,970
Percent Exclusive Use ²	58%	56%	34%	86%	59%	46%
Percent Leased to Others	42%	44%	66%	14%	41%	54%

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

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

³ Includes storage capacity for ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus stored separately or in mixes.

⁴ 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.

⁵ 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.