

## **Working and Net Available Shell Storage Capacity as of September 30, 2011**

*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. Beginning with data for March 2011, pipeline operators report stocks held in tanks and underground caverns separately from pipeline fill for the months of March and September.

Stocks held in tanks and underground caverns are used to calculate utilization rates for pipeline storage capacity. September 2011 data include stocks in tanks and underground storage and pipeline storage capacity utilization rates for gasoline, distillate fuel oil, and kerosene and kerosene-type jet fuel. Stocks in tanks and underground storage and storage capacity utilization rates are marked "Not Available" (NA) for natural gas plant liquids and liquefied refinery gases and "all other" products for September 2011 because of concerns related to accuracy and completeness of the reported data. We will continue working with pipeline operators to assess the data so that stocks in tanks and underground storage and storage capacity utilization rates can be published in a future release of *Working and Net Available Shell Storage Capacity*.

The situation with storage capacity of crude oil tank farms and stocks 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. Reported stocks are a combination of barrels held in tank farms and pipeline fill. Beginning with data for March 2011, operators of crude oil tank farms report stocks held in tank farms separately from pipeline fill for the months of March and September. 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, 2011**  
(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	19,014	19,071	71,003	4,100	36,926	150,114	89,822	60%
Fuel Ethanol	245	118	189	101	69	722	474	66%
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	2,856	9,979	24,114	509	2,208	39,666	19,781	50%
Propane/Propylene (dedicated) <sup>3</sup>	633	3,458	3,940	156	211	8,398	4,971	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	15,831	28,301	56,263	6,699	27,777	134,871	70,385	52%
Distillate Fuel Oil	11,168	15,031	27,666	3,670	10,373	67,908	34,738	51%
Kerosene and Kerosene-type Jet Fuel	2,302	4,299	9,353	557	7,070	23,581	12,314	52%
Residual Fuel Oil	2,341	2,565	9,249	592	6,107	20,854	9,648	46%
Asphalt and Road Oil	2,451	8,603	4,841	2,185	3,022	21,102	9,405	45%
All Other <sup>4</sup>	17,563	28,529	90,776	6,307	37,581	180,756	95,813	53%
Total <sup>5</sup>	73,771	116,496	293,454	24,720	131,133	639,574	342,380	54%
<b>Bulk Terminals (Including Fuel Ethanol Plants)<sup>6</sup></b>								
Fuel Ethanol	13,126	13,913	5,984	383	4,136	37,542	17,962	48%
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	8,197	56,629	286,213	42	8,221	359,302	102,143	28%
Propane/Propylene (dedicated) <sup>3</sup>	6,560	23,822	75,459	32	2,203	108,076	43,348	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	71,436	50,508	49,729	3,855	23,519	199,047	93,169	47%
Distillate Fuel Oil	83,293	35,127	37,766	2,387	13,613	172,186	85,642	50%
Kerosene and Kerosene-type Jet Fuel	12,503	6,641	6,324	462	8,505	34,435	20,211	59%
Residual Fuel Oil	24,983	1,252	32,247	-	4,337	62,819	24,905	40%
Asphalt and Road Oil	10,720	14,047	3,888	1,893	3,108	33,656	9,010	27%
All Other <sup>7</sup>	8,946	4,466	15,146	47	1,642	30,247	10,650	35%
Total	233,204	182,583	437,297	9,069	67,081	929,234	363,692	39%
<b>Product Pipelines</b>								
Fuel Ethanol	-	-	-	-	-	-	-	-
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	491	4,119	1,166	-	-	5,776	NA	NA
Propane/Propylene (dedicated) <sup>3</sup>	-	2,159	-	-	-	2,159	NA	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	16,838	10,979	16,580	471	2,466	47,334	14,685	31%
Distillate Fuel Oil	11,404	5,878	12,506	450	718	30,956	11,432	37%
Kerosene and Kerosene-type Jet Fuel	6,134	2,888	5,883	12	712	15,629	5,786	37%
All Other <sup>8</sup>	296	217	125	19	3	660	NA	NA
Total	35,163	24,081	36,260	952	3,899	100,355	34,371	34%
<b>Crude Oil Tank Farms</b>								
Crude Oil (Excluding SPR)	1,258	92,470	182,550	10,186	27,563	314,027	132,594	42%
Cushing, Oklahoma	--	55,008	--	--	--	55,008	29,139	53%
<b>Strategic Petroleum Reserve</b>								
Strategic Petroleum Reserve	-	-	727,000	-	-	727,000	695,023	96%

NA = Not Available

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

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

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

<sup>3</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>4</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>5</sup> Excludes petroleum coke.

<sup>6</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>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.

<sup>8</sup> 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 2. Net Available Shell Storage Capacity by PAD District as of September 30, 2011**  
(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	21,811	2,057	22,596	429	84,552	4,042	4,655	289	41,443	1,773	175,057	8,590	
Fuel Ethanol	282	-	145	5	202	-	118	5	80	-	827	10	
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	3,211	-	10,719	683	27,377	49	565	21	2,389	6	44,261	759	
Propane/Propylene (dedicated) <sup>3</sup>	721	-	3,717	215	4,002	-	171	12	241	1	8,852	228	
Motor Gasoline (incl. Motor Gasoline Blending Components)	17,904	1,638	32,424	1,035	65,950	2,100	7,598	78	32,027	620	155,903	5,471	
Distillate Fuel Oil	12,178	1,076	16,368	529	30,903	574	3,938	90	11,563	165	74,950	2,434	
Kerosene and Kerosene-type Jet Fuel	2,539	155	4,839	44	10,720	252	612	5	8,103	124	26,813	580	
Residual Fuel Oil	2,576	758	2,909	50	10,819	346	645	11	6,847	15	23,796	1,180	
Asphalt and Road Oil	2,633	30	9,609	212	5,340	338	2,416	64	3,251	229	23,249	873	
All Other <sup>4</sup>	19,785	1,037	31,957	1,090	102,437	6,074	7,030	534	42,504	1,094	203,713	9,829	
Total <sup>5</sup>	82,919	6,751	131,566	4,077	338,300	13,775	27,577	1,097	148,207	4,026	728,569	29,726	
<b>Bulk Terminals (Including Fuel Ethanol Plants)</b>													
Fuel Ethanol	15,271	72	15,913	168	6,587	103	425	7	4,716	15	42,912	365	
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	8,782	5	66,437	3,187	336,294	3,766	52	-	8,723	-	420,288	6,958	
Propane/Propylene (dedicated) <sup>3</sup>	7,077	3	27,354	2,009	87,207	9	41	-	2,355	-	124,034	2,021	
Motor Gasoline (incl. Motor Gasoline Blending Components)	80,627	1,500	57,856	559	56,325	323	4,317	-	27,010	354	226,135	2,736	
Distillate Fuel Oil	91,568	1,846	39,210	650	42,708	648	2,640	11	15,517	48	191,643	3,203	
Kerosene and Kerosene-type Jet Fuel	14,277	169	7,230	-	7,015	5	541	-	9,302	208	38,365	382	
Residual Fuel Oil	26,675	620	1,402	174	33,500	119	-	-	4,943	-	66,520	913	
Asphalt and Road Oil	11,399	218	15,032	608	4,247	86	2,017	-	3,401	4	36,096	916	
All Other <sup>6</sup>	9,661	590	4,877	293	15,873	167	55	-	1,998	20	32,464	1,070	
Total	258,260	5,020	207,957	5,639	502,549	5,217	10,047	18	75,610	649	1,054,423	16,543	
<b>Product Pipelines</b>													
Fuel Ethanol	-	-	-	-	-	-	-	-	-	-	-	-	
Natural Gas Plant Liquids and Liquefied Refinery Gases <sup>2</sup>	500	-	4,420	2	1,228	-	-	-	-	-	6,148	2	
Propane/Propylene (dedicated) <sup>3</sup>	-	-	2,276	-	-	-	-	-	-	-	2,276	-	
Motor Gasoline (incl. Motor Gasoline Blending Components)	18,572	414	12,261	44	18,788	527	515	-	2,911	-	53,047	985	
Distillate Fuel Oil	12,248	106	6,543	75	14,028	721	511	-	882	-	34,212	902	
Kerosene and Kerosene-type Jet Fuel	6,485	73	3,146	258	6,354	80	13	-	821	-	16,819	411	
All Other <sup>7</sup>	313	-	223	-	132	-	18	2	4	-	690	2	
Total	38,118	593	26,593	379	40,530	1,328	1,057	2	4,618	-	110,916	2,302	
<b>Crude Oil Tank Farms</b>													
Crude Oil (Excluding SPR)	1,561	-	112,336	1,750	206,326	2,352	12,392	257	34,064	1,108	366,679	5,467	
Cushing, Oklahoma	--	--	66,487	317	--	--	--	--	--	--	66,487	317	
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> Includes storage capacity for ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus stored separately or in mixes.

<sup>3</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>4</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>5</sup> Excludes petroleum coke.

<sup>6</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.

<sup>7</sup> 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 Crude Oil Tank Farms as of September 30, 2011<sup>1</sup>**  
(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	1,561	112,336	206,326	12,392	34,064	366,679
Percent Exclusive Use <sup>2</sup>	87%	52%	67%	90%	65%	63%
Percent Leased to Others	13%	48%	33%	10%	35%	37%
<b>Cushing, Oklahoma</b>						
Capacity In Operation	--	66,487	--	--	--	66,487
Percent Exclusive Use <sup>2</sup>	--	42%	--	--	--	42%
Percent Leased to Others	--	58%	--	--	--	58%
<b>Fuel Ethanol</b>						
Capacity In Operation	15,067	6,520	6,162	295	4,520	32,564
Percent Exclusive Use <sup>2</sup>	61%	52%	53%	92%	65%	58%
Percent Leased to Others	39%	48%	47%	8%	35%	42%
<b>Natural Gas Plant Liquids and Liquefied Refinery Gases<sup>3</sup></b>						
Capacity In Operation	8,782	66,437	336,294	52	8,723	420,288
Percent Exclusive Use <sup>2</sup>	68%	23%	16%	100%	58%	19%
Percent Leased to Others	32%	77%	84%	0%	42%	81%
<b>Propane/Propylene (dedicated)<sup>4</sup></b>						
Capacity In Operation	7,077	27,354	87,207	41	2,355	124,034
Percent Exclusive Use <sup>2</sup>	80%	20%	12%	100%	71%	19%
Percent Leased to Others	20%	80%	88%	0%	29%	81%
<b>Motor Gasoline (incl. Motor Gasoline Blending Components)</b>						
Capacity In Operation	80,627	57,856	56,325	4,317	27,010	226,135
Percent Exclusive Use <sup>2</sup>	64%	73%	33%	90%	51%	58%
Percent Leased to Others	36%	27%	67%	10%	49%	42%
<b>Distillate Fuel Oil</b>						
Capacity In Operation	91,568	39,210	42,708	2,640	15,517	191,643
Percent Exclusive Use <sup>2</sup>	61%	64%	29%	89%	45%	54%
Percent Leased to Others	39%	36%	71%	11%	55%	46%
<b>Kerosene and Kerosene-type Jet Fuel</b>						
Capacity In Operation	14,277	7,230	7,015	541	9,302	38,365
Percent Exclusive Use <sup>2</sup>	52%	73%	26%	29%	43%	49%
Percent Leased to Others	48%	27%	74%	71%	57%	51%
<b>Residual Fuel Oil</b>						
Capacity In Operation	26,675	1,402	33,500	-	4,943	66,520
Percent Exclusive Use <sup>2</sup>	42%	47%	5%	-	30%	22%
Percent Leased to Others	58%	53%	95%	-	70%	78%
<b>Asphalt and Road Oil</b>						
Capacity In Operation	11,399	15,032	4,247	2,017	3,401	36,096
Percent Exclusive Use <sup>2</sup>	40%	76%	76%	59%	76%	64%
Percent Leased to Others	60%	24%	24%	41%	24%	36%
<b>All Other<sup>5</sup></b>						
Capacity In Operation	9,661	4,877	15,873	55	1,998	32,464
Percent Exclusive Use <sup>2</sup>	47%	70%	14%	98%	62%	35%
Percent Leased to Others	53%	30%	86%	2%	38%	65%
<b>Total</b>						
Capacity In Operation	259,617	310,900	708,450	22,309	109,478	1,410,754
Percent Exclusive Use <sup>2</sup>	58%	53%	33%	85%	55%	45%
Percent Leased to Others	42%	47%	67%	15%	45%	55%

<sup>1</sup> Includes storage capacity of terminals and crude oil 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.