



Independent Statistics & Analysis
U.S. Energy Information
Administration

Working and Net Available Shell Storage Capacity

May 2020

With Data as of March 31, 2020



This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the Department of Energy or other Federal agencies.

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 once each year near the end of May (data for March 31).

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 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 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, 2020
(Thousand Barrels)

Commodity	PAD Districts					U.S. Total	Ending Stocks	Utilization Rate ¹
	1	2	3	4	5			
Refineries								
Crude Oil ²	12,612	19,087	73,279	3,881	34,200	143,059	97,956	68%
Fuel Ethanol	267	132	229	116	35	779	794	102%
Hydrocarbon Gas Liquids ³	1,177	8,700	23,090	434	3,065	36,466	13,996	38%
Propane/Propylene (dedicated) ⁴	403	2,743	4,172	54	154	7,526	2,727	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	8,664	27,464	57,986	7,162	26,563	127,839	71,424	56%
Distillate Fuel Oil	4,406	13,055	30,846	3,767	9,984	62,058	29,116	47%
Kerosene and Kerosene-type Jet Fuel	1,135	4,085	11,894	703	6,648	24,465	10,783	44%
Residual Fuel Oil	1,436	3,119	9,533	506	5,562	20,156	6,651	33%
Asphalt and Road Oil	1,053	8,900	3,817	1,996	1,468	17,234	9,826	57%
All Other ⁵	13,689	28,128	86,284	6,618	35,875	170,594	100,615	59%
Total ⁶	44,439	112,670	296,958	25,183	123,400	602,650	341,161	57%
Bulk Terminals								
Fuel Ethanol ⁷	12,749	5,570	8,297	300	4,171	31,087	21,671	70%
Natural Gas Liquids ⁸	14,368	58,600	353,251	6,596	7,256	440,071	123,059	28%
Propane (dedicated) ⁹	9,877	23,804	97,394	1,023	3,144	135,242	45,686	NA
Motor Gasoline (incl. Motor Gasoline Blending Components)	88,880	51,740	73,536	4,087	24,309	242,552	145,827	60%
Distillate Fuel Oil	74,432	33,789	32,429	2,531	12,072	155,253	65,138	42%
Kerosene and Kerosene-type Jet Fuel	13,470	7,016	9,237	552	10,014	40,289	21,362	53%
Residual Fuel Oil	18,614	910	28,941	-	4,603	53,068	27,719	52%
Asphalt and Road Oil	14,183	14,674	6,548	2,210	4,633	42,248	25,852	61%
All Other ¹⁰	8,916	4,152	31,200	7	5,263	49,538	22,025	44%
Total	245,612	176,451	543,439	16,283	72,321	1,054,106	452,653	43%
Crude Oil Tank Farms (excludes pipeline fill)²								
Crude Oil (Excluding SPR)	10,847	152,351	317,328	22,087	26,732	529,345	255,499	48%
Cushing, Oklahoma	--	75,835	--	--	--	75,835	45,645	60%
Strategic Petroleum Reserve	-	-	713,500	-	-	713,500	634,034	89%

¹ Utilization rate for refineries and bulk terminals 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.

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

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

⁴ 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.

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

⁶ Excludes petroleum coke.

⁷ Excludes storage capacity and ending stocks at fuel ethanol plants.

⁸ Includes storage capacity for ethane, propane, normal butane, isobutane, and natural gasoline stored separately or in mixes.

⁹ Dedicated Propane storage capacity includes storage capacity for propane stored separately. It excludes capacity for storing propane 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 stored in mixes as well as in dedicated storage.

¹⁰ All Other storage capacity at terminals includes 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"

Table 2. Net Available Shell Storage Capacity by PAD District as of March 31, 2020
(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 ²	14,240	1,332	23,734	325	87,761	1,919	4,420	187	39,338	1,053	169,493	4,816
Fuel Ethanol	329	-	163	7	266	67	139	-	41	9	938	83
Hydrocarbon Gas Liquids ³	1,326	22	9,991	46	26,874	916	472	32	3,204	38	41,867	1,054
Propane/Propylene (dedicated) ⁴	450	2	3,199	2	4,880	606	56	1	164	-	8,749	611
Motor Gasoline (incl. Motor Gasoline Blending Components)	9,802	2,128	32,344	1,192	69,140	1,999	8,189	222	30,271	648	149,746	6,189
Distillate Fuel Oil	4,999	1,106	14,643	384	34,836	916	4,125	39	11,163	68	69,766	2,513
Kerosene and Kerosene-type Jet Fuel	1,220	94	4,715	209	13,749	375	767	-	7,686	1	28,137	679
Residual Fuel Oil	1,637	208	3,658	186	11,152	249	556	8	6,251	230	23,254	881
Asphalt and Road Oil	1,267	-	10,200	496	4,357	15	2,179	86	1,563	240	19,566	837
All Other ⁵	15,443	774	32,502	869	100,499	3,084	7,318	248	40,711	1,317	196,473	6,292
Total⁶	50,263	5,664	131,950	3,714	348,634	9,540	28,165	822	140,228	3,604	699,240	23,344
Bulk Terminals												
Fuel Ethanol ⁷	14,644	99	6,593	37	9,209	647	376	3	4,828	9	35,650	795
Natural Gas Liquids ⁸	15,602	2	69,350	3,441	385,284	6,879	7,182	-	8,218	186	485,636	10,508
Propane (dedicated) ⁹	10,850	1	27,777	788	107,846	6,063	1,112	-	3,740	186	151,325	7,038
Motor Gasoline (incl. Motor Gasoline Blending Components)	100,437	1,351	61,072	947	86,649	1,272	4,847	30	28,678	398	281,683	3,998
Distillate Fuel Oil	81,334	1,036	38,250	234	38,116	506	2,974	-	13,694	474	174,368	2,250
Kerosene and Kerosene-type Jet Fuel	15,092	22	7,945	80	10,659	297	661	-	11,349	18	45,706	417
Residual Fuel Oil	20,720	1,435	978	30	30,726	78	-	-	5,373	412	57,797	1,955
Asphalt and Road Oil	15,244	149	15,666	16	7,190	94	2,405	-	4,963	96	45,468	355
All Other ¹⁰	10,010	28	4,475	264	33,728	1,613	8	-	6,259	75	54,480	1,980
Total	273,083	4,122	204,329	5,049	601,561	11,386	18,453	33	83,362	1,668	1,180,788	22,258
Crude Oil Tank Farms (excludes pipeline fill)²												
Crude Oil (Excluding SPR)	12,222	229	185,757	3,832	364,246	8,299	27,557	323	32,486	1,136	622,268	13,819
Cushing, Oklahoma	--	--	91,177	1,514	--	--	--	--	--	--	91,177	1,514
Strategic Petroleum Reserve	-	-	-	-	713,500	-	-	-	-	-	713,500	-

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 See <https://www.eia.gov/petroleum/storagecapacity/crudeoilstorage.xlsx> for additional information on crude oil stocks and storage capacity.

³ Includes storage capacity for ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and natural gasoline 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 hydrocarbon gas liquids storage.

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

⁶ Excludes petroleum coke.

⁷ Excludes storage capacity of fuel ethanol plants.

⁸ Includes storage capacity for ethane, propane, normal butane, isobutane, and natural gasoline stored separately or in mixes.

⁹ Dedicated Propane storage capacity includes storage capacity for propane stored separately. It excludes the propane component of mixed hydrocarbon gas liquids storage.

¹⁰ All Other storage capacity at terminals includes 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"

Table 3. Net Available Shell Storage Capacity of Terminals and Tank Farms as of March 31, 2020
(Thousand Barrels, Except Where Noted)

Commodity	PAD Districts					U.S. Total
	1	2	3	4	5	
Crude Oil (Excluding SPR)						
Capacity In Operation	12,222	185,757	364,246	27,557	32,486	622,268
Percent Exclusive Use ²	68%	45%	56%	85%	75%	55%
Percent Leased to Others	32%	55%	44%	15%	25%	45%
Cushing, Oklahoma						
Capacity In Operation	--	91,177	--	--	--	91,177
Percent Exclusive Use ²	--	12%	--	--	--	12%
Percent Leased to Others	--	88%	--	--	--	88%
Fuel Ethanol						
Capacity In Operation	14,644	6,593	9,209	376	4,828	35,650
Percent Exclusive Use ²	60%	47%	26%	78%	48%	48%
Percent Leased to Others	40%	53%	74%	22%	52%	52%
Natural Gas Liquids³						
Capacity In Operation	15,602	69,350	385,284	7,182	8,218	485,636
Percent Exclusive Use ²	78%	23%	20%	1%	64%	22%
Percent Leased to Others	22%	77%	80%	99%	36%	78%
Propane (dedicated)⁴						
Capacity In Operation	10,850	27,777	107,846	1,112	3,740	151,325
Percent Exclusive Use ²	82%	25%	18%	0%	58%	25%
Percent Leased to Others	18%	75%	82%	100%	42%	75%
Motor Gasoline (incl. Motor Gasoline Blending Components)						
Capacity In Operation	100,437	61,072	86,649	4,847	28,678	281,683
Percent Exclusive Use ²	51%	67%	22%	72%	46%	46%
Percent Leased to Others	49%	33%	78%	28%	54%	54%
Distillate Fuel Oil						
Capacity In Operation	81,334	38,250	38,116	2,974	13,694	174,368
Percent Exclusive Use ²	52%	62%	30%	75%	43%	49%
Percent Leased to Others	48%	38%	70%	25%	57%	51%
Kerosene and Kerosene-type Jet Fuel						
Capacity In Operation	15,092	7,945	10,659	661	11,349	45,706
Percent Exclusive Use ²	41%	58%	11%	23%	23%	32%
Percent Leased to Others	59%	42%	89%	77%	77%	68%
Residual Fuel Oil						
Capacity In Operation	20,720	978	30,726	-	5,373	57,797
Percent Exclusive Use ²	29%	37%	4%	-	25%	16%
Percent Leased to Others	71%	63%	96%	-	75%	84%
Asphalt and Road Oil						
Capacity In Operation	15,244	15,666	7,190	2,405	4,963	45,468
Percent Exclusive Use ²	54%	74%	54%	63%	90%	65%
Percent Leased to Others	46%	26%	46%	37%	10%	35%
All Other⁵						
Capacity In Operation	10,010	4,475	33,728	8	6,259	54,480
Percent Exclusive Use ²	43%	59%	4%	75%	61%	23%
Percent Leased to Others	57%	41%	96%	25%	39%	77%
Total						
Capacity In Operation	285,305	390,086	965,807	46,010	115,848	1,803,056
Percent Exclusive Use ²	52%	48%	33%	68%	55%	42%
Percent Leased to Others	48%	52%	67%	32%	45%	58%

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, propane, normal butane, isobutane, and natural gasoline stored separately or in mixes.

⁴ Dedicated Propane storage capacity includes storage capacity for propane stored separately.
It excludes the propane component of mixed hydrocarbon gas liquids storage.

⁵ All Other storage capacity at terminals includes 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"