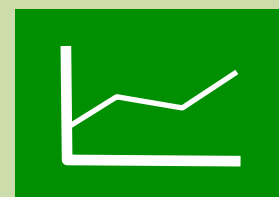
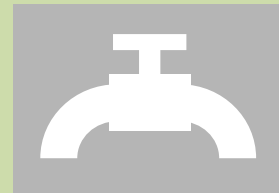
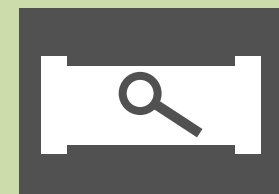


# U.S. Liquids Pipeline Usage & Mileage Report



November 2015



### **ASSOCIATION OF OIL PIPE LINES (AOPL)**

represents liquid pipeline owners and operators transporting crude oil, petroleum products like gasoline, diesel, jet fuel, and home heating oil and industrial products like propane and ethane.

### **AMERICAN PETROLEUM INSTITUTE (API)**

is the only national trade association that represents all aspects of America's oil and natural gas industry.

## U.S. Liquids Pipeline Usage & Mileage Is Growing

November 2015

Pipelines are among the safest, most cost-effective and efficient ways to deliver energy liquids. A barrel of crude oil or petroleum products reaches its destination safely over 99.999% of the time. Delivering crude oil by pipeline can cost per barrel as little as half of other modes of transportation. Lower costs applied to the billions of barrels of crude oil flowing across our nation make pipelines the most efficient means of transporting petroleum products.

The inherent safety, cost and efficiency benefits of pipelines provide an ongoing opportunity for pipeline growth. That incentive continued in 2014 with growth in liquids pipeline mileage and increased deliveries of crude oil by pipeline. Liquids pipelines stretched over 199,000 miles across the U. S. in 2014, a 3.5% increase over 2013. Crude oil pipeline mileage grew over 5,000 miles in 2014, a 9.1% increase over 2013. Between 2010 and 2014, crude oil pipeline mileage in the U.S. increased 12,000 miles or 22.0%. Another way to put that, in the time the Keystone XL pipeline was under review, we built the equivalent length of 12 Keystone XL pipelines across the United States.

The volume of crude oil deliveries by pipeline also maintained their strong growth in 2014. Pipelines delivered 9.3 billion barrels of crude oil across the U.S. in 2014, a nearly 1 billion barrel or 11.6% increase over 2013. Annual crude oil deliveries by pipeline grew 2.1 billion barrels from 2010 to 2014, a 30.8% increase. Other petroleum product deliveries grew nearly ½ a billion barrels from 2010 to 2014, a 7.6% increase. Total deliveries by liquids pipeline of crude oil, refined products such as gasoline or diesel fuel, and natural gas liquids such as ethane totaled 16.2 billion barrels in 2014, an 8.1% increase from 2013.

The fall in crude prices during 2014 and 2015 has led to a slowdown in U.S. crude production growth. However, the advantages of pipeline delivery discussed above are fundamental. Operators are optimistic about maintaining existing throughput and constructing new pipelines. Over the long term, there will still be a need for pipeline growth to connect supply areas to demand locations. How these dynamics play out will be reflected in the 2016 usage and mileage report.



# 2014 U.S. LIQUIDS PIPELINE USAGE & MILEAGE SUMMARY

**16.2 Billion Barrels**

Liquids pipeline operators delivered 16.179 billion barrels of *crude oil and petroleum products* by U.S. transmission pipeline in 2014

**+8.1%**

Total *crude oil and petroleum products* delivered by U.S. transmission pipeline rose 8.1% from 2013 to 2014

**9.3 Billion Barrels**

Liquids pipeline operators delivered 9.290 billion barrels of *crude oil* by U.S. transmission pipeline in 2014

**+11.6%**

*Crude oil barrels delivered* by U.S. transmission pipeline rose 11.6% from 2013 to 2014

**+2.1 Billion Barrels**

Over the last 5 years, *crude oil barrels delivered* by U.S. transmission pipeline rose 2.143 billion barrels or 30.8%

**199,243 Miles**

U.S. *total liquids pipeline mileage* was 199,243 miles in 2014, a 6,826 mile or 3.5% increase over 2013

**+17,257 Miles**

Over the last 5 years, U.S. *total liquids pipeline mileage* increased 17,257 miles

**+9.5%**

Over the last 5 years, U.S. *total liquids pipeline mileage* increased 9.5%

**66,649 Miles**

Pipeline operators operated 66,649 miles of U.S. *crude oil pipeline* in 2014

**+12,018 Miles**

Over the last 5 years, U.S. *crude oil pipeline mileage* increased 12,018 miles

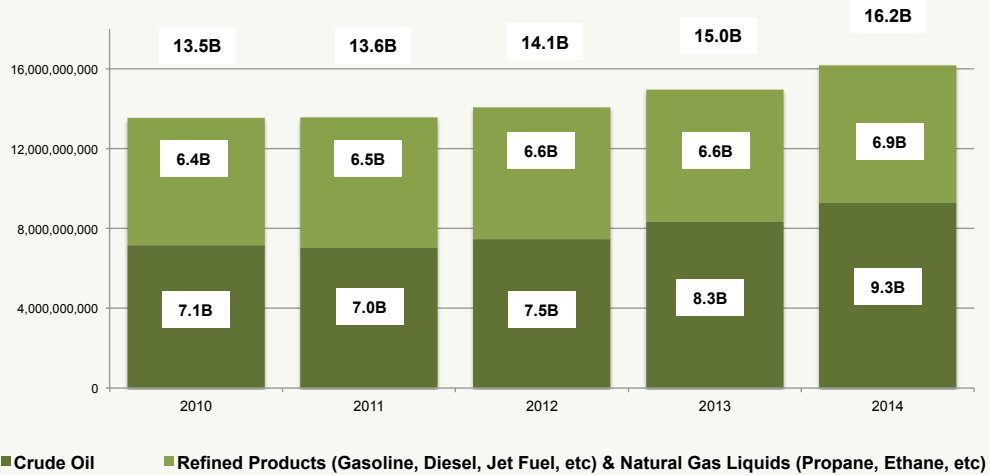
**+22.0%**

Over the last 5 years, U.S. *crude oil pipeline mileage* increased 22.0%



# Liquids Pipelines Transported Over 16 Billion Barrels of Crude Oil and Petroleum Products in 2014

Barrels of Crude Oil & Petroleum Products Delivered by Transmission Pipeline



Source: Compiled operator filings to the U.S. Federal Energy Regulatory Commission



# Liquids Pipeline Barrels Delivered Data

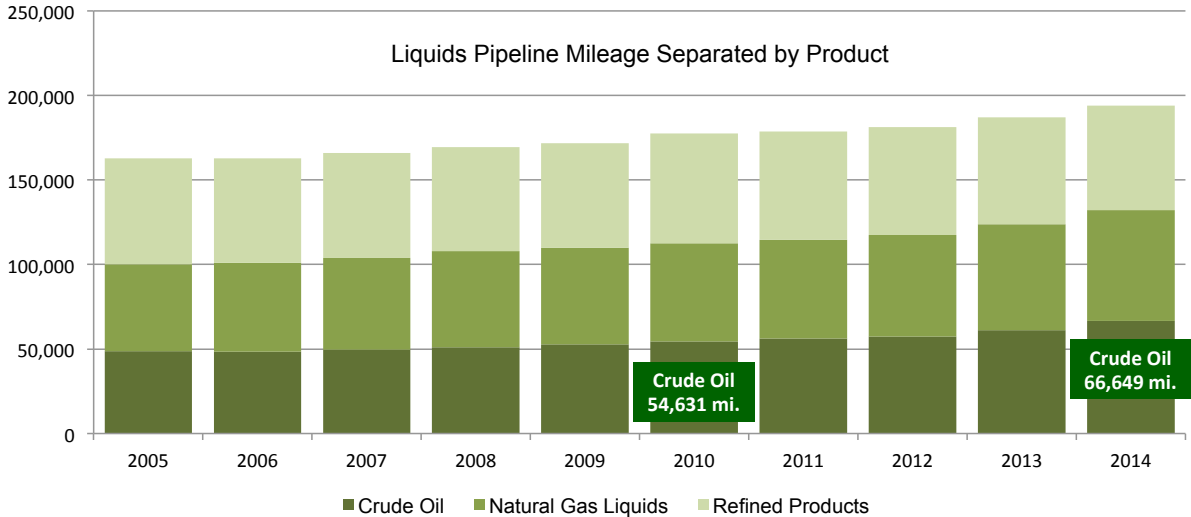
- In 2014, transmission liquids pipelines delivered 9.290 billion barrels of crude oil, an 11.6% increase over 2013
- In 2014, transmission liquids pipelines delivered 6.889 billion barrels of petroleum products, such as refined products (gasoline, diesel, jet fuel, etc) and natural gas liquids (propane, ethane, butane, etc), a 3.7% increase over 2013
- In total, transmission liquids pipelines delivered 16.179 billion barrels of crude oil and petroleum products in 2014, an 8.1% increase over 2013
- Over the 5 years from 2010 to 2014, transmission liquids pipeline deliveries of crude oil rose 2.143 billion barrels, a 30.8% increase
- During the same 5 year time period, other petroleum products delivered by transmission pipeline increased 498.2 million barrels or 7.6%
- Transmission pipelines include interstate pipelines or other large intrastate, main- or trunk-line pipelines

## Barrels of Crude Oil and Petroleum Products Delivered by U.S. Transmission Pipeline

Year	Crude	Change from Previous Year	Product	Change from Previous Year	Total	Change from Previous Year
<b>2010</b>	7,147,234,555	2.8%	6,390,376,415	-2.6%	13,537,610,970	0.2%
<b>2011</b>	7,031,632,001	-1.6%	6,539,979,731	2.3%	13,571,611,732	0.3%
<b>2012</b>	7,460,710,613	6.1%	6,618,479,649	1.2%	14,079,190,262	3.7%
<b>2013</b>	8,324,012,774	11.6%	6,643,084,825	0.4%	14,967,097,599	6.3%
<b>2014</b>	9,289,972,460	11.6%	6,888,545,527	3.7%	16,178,517,987	8.1%
<b>2013-2014</b>						
<b>1 Yr Incr.</b>	965,959,686	11.6%	245,460,702	3.7%	1,211,420,388	8.1%
<b>2010-2014</b>						
<b>5 Yr Incr.</b>	2,142,737,905	30.8%	498,169,112	7.6%	2,640,907,017	19.5%

Source: AOPL Compilation of FERC Form 6 Data

# Crude Oil Pipeline Mileage Up Over 12,000 Miles Since 2010



- In 2014, pipeline operators reported 199,243 miles of liquids pipeline in operation in the U. S., with 66,649 miles devoted to crude oil, 61,681 miles transporting refined petroleum products (gasoline, diesel, jet fuel, etc), and 65,595 miles delivering natural gas liquids (propane, ethane, butane, etc)
- Total U.S. pipeline mileage of 199,243 miles in 2014 reflected a 6,826 mile or 3.5% increase over 2013, a 17,257 mile or 9.5% increase over the last 5 years, and a 32,483 mile or 19.5% increase over the last 10 years
- Crude oil pipelines stretched 66,649 miles across the U.S. in 2014, up 5,562 miles or 9.1% over 2013, a 12,018 mile or 22.0% increase over the last 5 years, and a 17,917 mile or 36.8% increase over the last 10 years
- Refined petroleum product pipeline mileage of 61,681 miles in 2014 was a 1,670 mile or 2.6% decrease from 2013, a 3,119 mile or 4.8% decrease from 5 years ago, and a 1,218 mile or 1.9% decrease from 10 years ago
- U.S. pipelines carrying natural gas liquids totaled 65,595 miles in 2014, 2,827 miles or 4.5% above 2013 mileage, 7,615 miles or 13.1% above 2010 levels, and 14,311 miles or 27.9% above 2005 mileage



<u>Year</u>	<u>Total Liquids Pipeline Miles</u>	<u>Annual Increase</u>	<u>Crude Oil</u>	<u>Annual Increase</u>	<u>Refined Products</u>	<u>Annual Increase</u>	<u>NGLs</u>	<u>Annual Increase</u>
2005	166,760	0.1%	48,732	-1.1%	62,899	0.8%	51,284	-1.0%
2006	166,719	0.0%	48,453	-0.6%	61,905	-1.6%	52,533	2.4%
2007	169,846	1.9%	49,488	2.1%	62,091	0.3%	54,382	3.5%
2008	173,789	2.3%	50,963	3.0%	61,599	-0.8%	57,024	4.9%
2009	175,965	1.3%	52,737	3.5%	61,803	0.3%	57,233	0.4%
2010	181,986	3.4%	54,631	3.6%	64,800	4.8%	57,980	1.3%
2011	183,500	0.8%	56,100	2.7%	64,130	-1.0%	58,599	1.1%
2012	186,221	1.5%	57,463	2.4%	64,042	-0.1%	59,861	2.2%
2013	192,417	3.3%	61,087	6.3%	63,351	-1.1%	62,768	4.9%
2014	199,243	3.5%	66,649	9.1%	61,681	-2.6%	65,595	4.5%
1yr Chg	6,826	3.5%	5,562	9.1%	-1,670	-2.6%	2,827	4.5%
5yr Chg	17,257	9.5%	12,018	22.0%	-3,119	-4.8%	7,615	13.1%
10yr Chg	32,483	19.5%	17,917	36.8%	-1,218	-1.9%	14,311	27.9%

Source: U.S. Pipeline and Hazardous Materials Safety Administration, Oct. 1, 2015

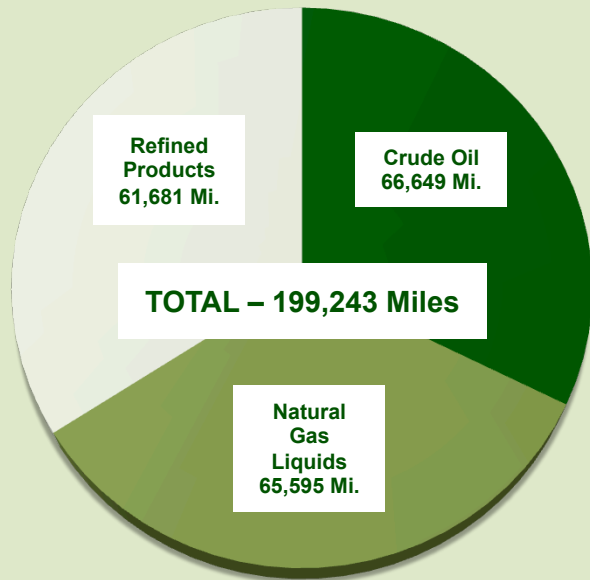
## Liquids Pipeline Mileage Data



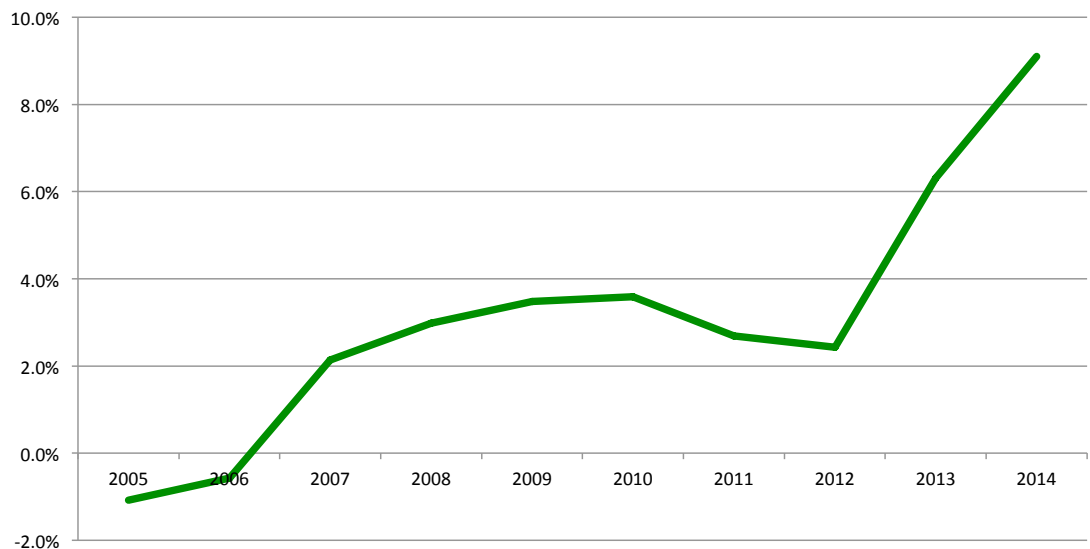


## 2014 Liquids Pipeline Mileage

Crude oil pipeline growth has accelerated over the last 10 years



### Annual % Change in Crude Oil Pipeline Mileage





## Sources

### **Liquids Pipeline Mileage Data**

Liquids pipeline mileage data derived from information submitted by pipeline operators to the U.S. Pipeline and Hazardous Materials Safety Administration *Annual Report Mileage for Hazardous Liquid or Carbon Dioxide Systems* at <http://www.phmsa.dot.gov/pipeline/library/data-stats/annual-report-mileage-for-hazardous-liquid-or-carbon-dioxide-systems>. Figures presented in this report current as of October 1, 2015. Total liquids pipeline mileage includes crude oil, refined products, natural gas liquids and carbon dioxide pipelines.

### **Liquids Pipeline Delivery Data**

Data on barrels of crude oil and petroleum products delivered by U.S. transmission pipeline assembled by AOPL from annual Form 6 filings by pipeline operators to the U.S. Federal Energy Regulatory Commission.

