

Weather Will Call the Shots This Winter

Any winter's impact on the propane industry depends on the temperature, and the coming heating season merely magnifies this truism. The U.S. will enter this season with its lowest primary inventory level in many years and, depending on how cold the weather becomes, may exit the winter at an all-time record low from which it must recover.

In addition, inventory, or lack thereof, will certainly reflect on propane prices. Although crude oil prices seem likely to remain the dominant force in propane pricing—even though natural gas's impact will likely be felt this winter—weak inventory levels will move propane's price in relationship to crude oil, and that can have a dramatic effect.

Daniel Lippe with Petral Consulting (Houston) has offered his perspective on the coming heating season. He concludes that propane supply this season will be adequate if heating degree-days are below average. But, supply will be tight, especially during the first quarter, if heating-degree days are average or above.

Lippe's overall supply perspective examines production and imports to explain what shaped and will shape available supply during the heating season, and imports obviously have had, and will continue to have, a big impact. However, imports are but part of the equation, with production another key supply element.

He noted that propane production from gas plants and refineries (net of refinery propylene sales) is forecast to average 825-835 Mbbld, or a season-long 150-152 MMbbl. Last winter, total U.S. production averaged 812 Mbbld or 147.8 MMbbl. The modest year-to-year increase in domestic production will not offset the year-to-year decline in propane inventories in primary storage of approximately 10 MMbbl.

Canadian and waterborne imports to East Coast and Gulf Coast terminals are forecast to average 200-225 Mbbld or 36-41 MMbbl during the winter heating season. Imports in

2006/2007 averaged 216 Mbbld or 39.2 MMbbl.

The volume of waterborne imports—through East Coast and Gulf Coast terminals—during the second quarter totaled 7.2 MMbbl, or 4.6 MMbbl less than during 2006 but 800 Mbbbl more than the average for 2003/2004. “This decline in waterborne imports aggravated the inventory deficit of 2.6 MMbbl on April 1. Prior to 2005, however, waterborne imports seldom reached peak volumes until the third quarter and in some years reached peak volumes as late as October,” said Lippe.

He added that the 30%-60% decline in waterborne imports during the second and third quarters compared to the same period in 2006 is the key difference in propane supply.

“With only modest growth in domestic supply, propane markets in the U.S. and Canada have no practical way to make up the cumulative loss of 11.8 MMbbl,” said Lippe. “However, ethylene feedstock demand is likely to fall sharply during the fourth quarter. The expected year-to-year decline in feedstock demand will offset only about 5 MMbbl of the 10-12 MMbbl of inventory deficit.”

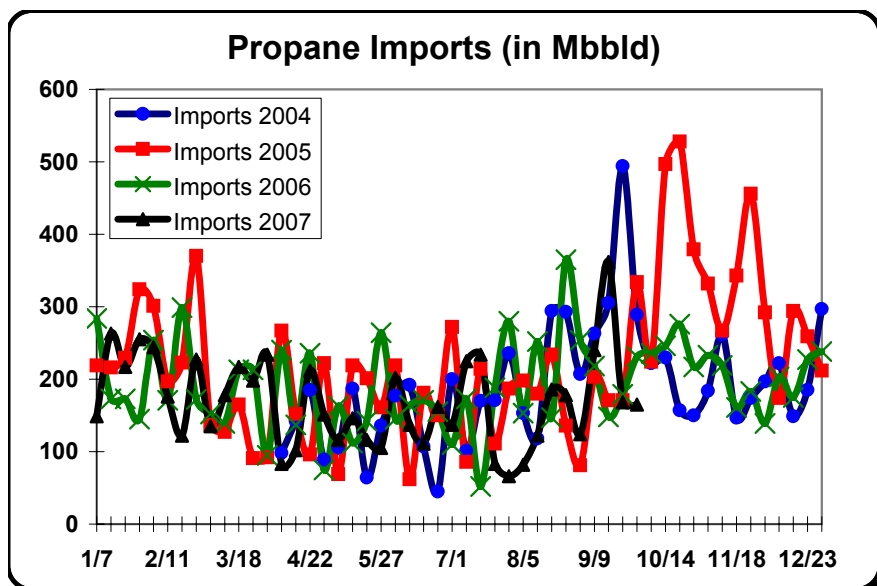
Because propane exports from Saudi Arabia this year were consistently 100 Mbbld lower than year-earlier volumes during the first, second, and third quarters, total propane availability internationally is tighter, and is likely to remain tight. Hence, waterborne imports during the third quarter are not likely to surge to 100+Mbbld as was true in 2005 and 2006. Instead, waterborne imports are forecast to total only 5.5-6.0 MMbbl, or 7.2 MMbbl less than in 2006.

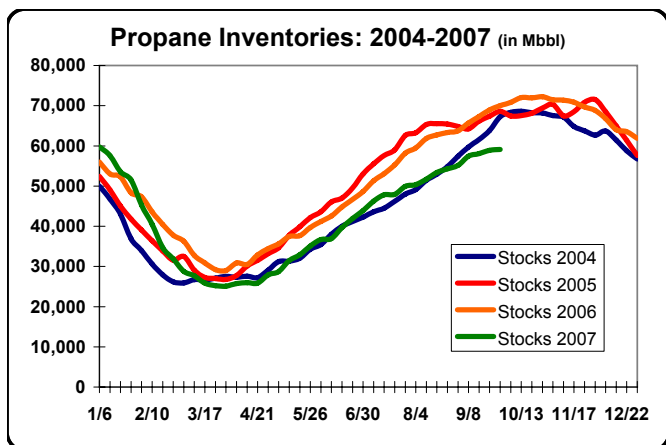
“While there has been speculation regarding the reason for the decline in propane exports from Saudi Arabia, SABIC [Saudi Basic Industries Corp.] probably increased its consumption of propane for ethylene production. Without these volumes, Saudi Aramco reduced exports into the Mediterranean and Europe. As a result, more of the exports from Algeria and the North Sea went into these markets and fewer cargoes moved into the U.S.,” explained Lippe.

Lippe foresees total primary supply for the winter 2007/2008—production plus imports plus inventory withdrawals—to be in the range of 224-235 MMbbl. During 2000-2006, total primary supplies for the winter heating season were in the range of 230-247 MMbbl. Total primary supply for the winter 2007/2008 will probably be 10 MMbbl less than in recent years.

Will Inventories Rebound?

At the end of September, U.S. inventories totaled about 58-59 MMbbl. With four weeks left in the traditional inventory-building period before the start of the heating season, they had a chance to reach 61-62 MMbbl if the weekly build averaged 500-750 Mbbld. The inventory build in 2004 for that same eight-week period was





1145 Mbbbl/week, and the build in 2006 was 920 Mbbbl/week. However, the inventory build averaged only 521 Mbbbl/week in 2003 and 543 Mbbbl/week in 2005, noted Lippe.

Thus, four weeks before the end of the building season, propane consumers and marketers had a chance that inventories in primary storage could surpass the 60 MMbbl mark—the “psychological” point of well-being to begin winter—and peak as high as 62 MMbbl.

“We view an inventory peak of 61-62 MMbbl to be moderately bullish for prices during the fourth quarter due to the need for the decline in feedstock demand during the fourth quarter of 2007 to be above average,” said Lippe.

Inventories of purity propane—excluding refinery-grade propylene—at the end of September totaled only 57 MMbbl versus the year-earlier total of 67 MMbbl. Propane markets faced an inventory deficit for purity propane of 10 MMbbl with only four weeks remaining before Nov. 1.

Propane inventories in the Gulf Coast totaled 28.0-28.5 MMbbl at the end of September. Gulf Coast storage had only 26.0-26.5 MMbbl of propane on Sept. 1 and were about 4.7 MMbbl lower than in 2006. In the remaining four weeks, total inventories in Gulf Coast storage were forecast to reach a peak of 29-30 MMbbl, and purity propane inventories are forecast to reach a peak of 27-28 MMbbl, or about 4-5 MMbbl less than in 2006, noted Lippe.

Inventories in the Mid-Continent totaled about 23 MMbbl at the end of October, some 3.0 MMbbl lower than in 2006. Stocks in the Mid-Continent are forecast to peak at 24-25 MMbbl on Nov. 1, almost equal to year-earlier volumes.

Possibility of a Record Low

Lippe believes that during the winter of 2007/2008, withdrawals of propane from primary U.S. storage will total 38-40 MMbbl. Based on a peak inventory level of 61 MMbbl, U.S. propane inventories will fall to a winter low of 21-23 MMbbl. At this level, inventories in primary storage will be at the low end of the historical range. The all-time record low of 21.62 MMbbl was posted at the end of March 2003.

“Propane retailers and residential/commercial consumers usually accumulate 35-4() MMbbl of supply in tertiary storage. Forecasts for the winter heating season are based on typical volumes transferred into tertiary storage during the summer and fall months: usually transfers to tertiary storage are at peak rates during September through November.”

In terms of propane demand, Lippe noted that U.S. supply/demand forecasts are based on residential/commercial demand in the range of 825-840 Mbbld (150-153 MMbbl six-month winter season total). During 2000-2006, winter season residential/commercial demand was in the range of 145-175 MMbbl and averaged 159 MMbbl.

Total retail demand (residential/commercial plus vehicle fuel plus agriculture) is forecast to average 0.975-1.0 MMbbl (177-182 MMbbl). Demand in other end uses (industrial and ethylene feedstock) is forecast to total 64-68 MMbbl. Industrial sector demand usually averages 80 Mbbld (14 MMbbl). During the winter of 2006/2007, industrial sector and ethylene feedstock demand totaled about 77 MMbbl.

Propane supply available for ethylene feedstock markets and exports will be about 52-55 MMbbl or 280-300 Mbbld. Since exports to Mexico, Central America, and markets in the Caribbean typically average 15-20 Mbbld, net availability will support 260-280 Mbbld of ethylene feedstock demand. Ethylene feedstock demand averaged 370 Mbbld in 2004/2005, 310 Mbbld in 2005/2006, and 338 Mbbld in 2006/2007. Feedstock demand is forecast to average 275-285 Mbbld during the winter heating season. While it is forecast to average 260-270 Mbbld during the fourth quarter 2007, it is expected to average 290-310 Mbbld during the first quarter 2008.

“The flexibility of the ethylene feedstock markets in Texas and Louisiana will tend to counterbalance the tight supply situation at the beginning of the winter heating season. However, feedstock demand will decline only if propane is consistently more expensive than ethane and natural gasoline,” said Lippe.

Prices Showing Strength

“During the second quarter 2007, spot propane prices in Mont Belvieu averaged 113.2 cents/gal. and propane’s composite feedstock parity value (ethane and natural gasoline) averaged 112.8 cents/gal. As perceptions of tighter availability began to emerge, propane prices averaged 119 cents/gal. in July and 117-119 cents/gal. in August. However, composite feedstock parity values averaged only 115 cents/gal. in July and 111-112 cents/gal. in August. These comparisons indicate that propane prices were already strengthening.”

Lippe forecasts propane prices to average about 3-6 cents/gal. higher than composite feedstock parity values during the fourth quarter 2007 and into January/February 2008.

—Pete Ottman

