

What's Driving Asphalt Prices Up?

By Paul Fournier

Plant upgrades yield more gasoline and diesel and less asphalt per barrel, impacting supplies and costs of a key pavement ingredient.

While motorists and truckers are reeling from the shock of skyrocketing gas and diesel fuel prices, others are deeply concerned over the cost of a related commodity – asphalt, the residue of crude oil distillation and the glue that binds together the road surfaces that vehicles ride on.

Contractors, public works officials and others who build and maintain the nation's highways and streets are struggling with the steepest price rise in memory for this key pavement ingredient.

As an illustration, the price for performance-graded PG64-28 asphalt binder on the East Coast market climbed from \$180 per ton in April 2004 to \$422 per ton in April 2008, according to the Asphalt Weekly Monitor produced by Potent Partners Inc.

And this was the price at the terminal. Customers such as hot mix asphalt (HMA) suppliers must pay additional costs to have the material delivered to their facilities, and are forced to charge more for the mix they supply to paving contractors and highway officials for road construction and maintenance projects.

Record Asphalt Prices Across U.S.

Jim Reger, president of P.J. Keating Company, a Lunenburg, MA-based construction materials company, blames the high price of asphalt on the soaring cost of crude oil and the fact they have just one supplier in his area.

Keating, a subsidiary of Oldcastle Inc., operates aggregate quarrying, crushing and HMA facilities in Massachusetts and Rhode Island, as well as a paving division. In May, the company was obtaining its asphalt at a barge

terminal in Newington, NH, paying roughly \$425 per ton. An additional delivery cost of \$45 per ton brought the total to approximately \$470.

This is in line with costs reported by John Johnson, liquid asphalt sales manager for Aggregate Industries' Northeast U.S. Region's Massachusetts HMA plants.

Keating's Reger also said he believes the price of delivered asphalt for his area could conceivably ratchet up to between \$500 and \$600 per ton in the not-too-distant future.

pay about \$415 per ton delivered for its next major purchase. This compares to the company's previous delivery purchase price of \$365 per ton. With millions of gallons of emulsion produced each year at the company's three Texas plants, this is a substantial price hike.

On the West Coast, prices at the Portland, OR, terminal in late spring for Performance-Graded PG64-22 asphalt binder were running between \$310 and \$320 per ton according to the state's Department of Transportation. And in the Southeast, Panama City, FL's



Petroleum refineries are adding cokers to existing plants, producing more gasoline and diesel and less asphalt for road construction.

Elsewhere in the U.S., asphalt prices are lower but still high historically.

For example, Ergon Asphalt & Emulsions Inc., a unit of Jackson, MS-based Ergon Inc., is seeing record prices for asphalt supplied to its three emulsion plants in Texas. According to David Stroud, Ergon's regional sales manager, the company was expecting to

NEWS 13, reporting on the mounting cost of gasoline, also informed viewers of the related surge of asphalt prices to \$375 per ton, almost double that of five years ago.

Refineries Making Less Asphalt

Booming asphalt prices are due to several factors, chief among them the

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unprecedented cost of crude oil. As a case in point, during the same four-year period that the price of a ton of East Coast binder went from \$180 to \$422, the spot price for benchmark West Texas Intermediate crude oil spiraled upward from \$37 per barrel to \$120 according to the U.S. Energy Information Agency.

But the high cost of asphalt these days cannot be attributed solely to the cost of crude. New processing technologies are affecting the amount of asphalt being produced at the refineries.

While asphalt does occur naturally, as in some lake deposits in Trinidad and Venezuela, most of the world's supply comes from the fractional distillation of crude oil. A series of processes at the refinery separate raw petroleum into its various components, from lighter hydrocarbons such as naphtha, gasoline and diesel fuel to heavier fractions including asphalt. There has not been a new refinery built in the U.S. since the late 1970s, but there have been expansions and upgrades at existing refineries. However, due to the growing demand

for gasoline and diesel, much of the upgrades, such as adding "cokers" to the refining process, are designed to yield more of the lighter, pricier distillates from each barrel of crude.

This means less asphalt is produced from that same barrel of crude, which is not great news for the highway construction industry.

Less Asphalt, Less Road Work

"When a coker is added to the refining process, more light fuels can be processed from the lower, heavier, asphalt ends," said James Andrews, one of the asphalt experts at BASF Corporation. "And that has a negative impact on the asphalt market by reducing supply, which ultimately raises prices."

Adding cokers makes good economic sense to refiners, he said, citing a report by **Argus Media**, independent energy news and price reporting agency, that estimates a return on investment for a \$1-billion coker is just over four years.

Eventually asphalt supply and demand will equalize and prices will level

off, he said. But until that happens, as long as asphalt prices are still rising and without significant increases in highway funding, fewer lane miles will be constructed or reconstructed. In light of this, there will be a call for ways to protect the nation's huge investment in its highways, roads and streets while stretching available dollars.

Prices Still Climbing

Since data was collected in May 2008 for this article, crude oil prices have continued to surge. On July 14, the spot price for West Texas Intermediate peaked at \$145.16 before retreating slightly for the rest of the month.

Prices for performance-graded asphalt rose even more precipitously. BASF Corporation's Jim Andrews provided the following price-per-ton ranges for PG 64-22 asphalt at different locations on August 1 (prices within each region can vary by plus or minus \$25 per ton):

- Northeast \$725
- Southwest \$675
- Northwest \$775
- Southeast \$700

Conserving Asphalt: Pavement Preservation

One way to accomplish this is by using maintenance applications including micro surfacing, chip seal, slurry seal, and thin lift overlays that employ asphalt emulsions fortified with polymers, said Andrews. Such polymers improve resistance to rutting and thermal cracking and protect asphalt from oxidation. This extends pavement life, thereby reducing asphalt binder consumption and hence saving money.

"These and other pavement preservation techniques are the key to managing reduced asphalt supply and increasing costs," he concluded. ■

For information on asphalt products, go to acppubs.com.

Prices for asphalt binder used by paving contractors in some areas have doubled in the last year.

