US shale oil reviving East Coast refineries

Fracking offers a cheaper supply; keeps gas prices from rising

By Erin Ailworth
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A year ago, the shutdown of several refineries serving the Northeast and the possibility they would not reopen threatened to boost New England's already high gasoline prices by as much as 15 cents a gallon. But an influxof cheaper crude oil extracted from shale rock formations in the United States has helped save most of those facilities and stabilized gas - prices.

The revival of the East Coast refineries is another example of how the controversial drilling process known as hydraulic fracturing, or fracking, is changing the energy equation for the region, nation, and world.

Just as fracking opened vast reserves of natural gas over the past decade, it is now unlocking crude oil trapped in shale deposits. It is so dramatically increasing domestic production that the United States is projected to surpass Saudi Arabia as the world's biggest oil producer by 2017.

The influx of this domestic crude, known as "tight oil," has allowed East Coast refineries to decrease their reliance on more expensive foreign oil, increase profit margins, and regain their economic competitiveness, refinery operators say. They estimate the domestic crude cuts oil costs by a few dollars per barrel, which can have a huge impact on their bottom line.

"A savings of $1 per barrel across our entire refining system is worth several hundred million dollars of net income to Phillips 66," said Dennis Nuss, spokesman for the Houston company operating the Bayway refinery in New Jersey.

In Philadelphia, domestic supplies have helped resurrect a facility that accounts for nearly one-fourth of East Coast refining capacity. It was put up for sale in 2011 and expected to close for good last summer as high oil prices and slackening demand made it barely profitable. Today, it is refining up to 330,000 barrels of oil a day, getting about 10 percent of its crude from the Bakken shale formation in North Dakota.

Phil Rinaldi, chief executive of Philadelphia Energy Solutions, the company that now operates the refinery, said the domestic supplies are pressuring foreign producers to keep their prices competitive.

“It allows us for the first time in a very long time to have some genuine diversity of supply,” he said. “The shale plays are game-changers.”

Last week, the average Massachusetts gas price was $3.68 a gallon, 12 cents higher than a year ago and up 25 cents in the last month alone, according to AAA Southern New England. If the refineries had stayed shuttered, however, prices would have been driven even higher, analysts believe.

But the process used to extract the oil is controversial. Fracking pumps chemical-laced, pressurized water deep into the earth to split open shale, releasing oil or natural gas. The method has spurred fears that chemicals and other substances will pollute drinking water and the air.

Environmental groups such as the Natural Resources Defense Council are pushing for stricter regulations.

“It’s a lot of the same risks from any oil and gas production, and a lot of the same risks that people have been hearing about from shale gas production,” said Briana Mordick, a staff scientist at the NRDC. “There’s broad agreement that something needs to be done.”

These concerns have played against economic benefits that are lowering energy costs for consumers and businesses, creating jobs, and sparking booms in North Dakota and other oil- producing states.

The Lexington forecasting firm IHS estimates that extraction of shale gas and oil added $62 billion in revenues to federal and state coffers last year.

“Tight oil is allowing some of the refineries to operate,” said Alfred Luaces, an economist at IHS. “A couple of years ago they were in bad straits.’’

One of those refineries given new life is Marcus Hook, owned by Sunoco in Pennsylvania. Sunoco’s pipeline subsidiary now plans to use the plant, shuttered in December 2011, to process natural gas products from the Marcellus shale formation, part of which is in Pennsylvania. ConocoPhillip’s shuttered refinery in Trainer, Pa., was purchased by Delta Air Lines, which is looking to produce jet fuel.

Still, part of the problem for Northeastern refineries has been a lack of pipeline capacity to move domestic supplies from oil-producing areas, meaning higher transportation costs and lower profit margins. But so much crude is coming from shale drilling in places such as Texas and North Dakota that refiners can buy it cheaply, ship it by rail or barge, and still beat the cost of imports.

The number of rail cars carrying petroleum or petroleum products jumped 46 percent last year, according to the Association of American Railroads.Continued...

Massachusetts companies such as Pan Am Railways, of Billerica, and the oil terminal operator Global Partners LP in Waltham are benefiting from the boom. In January alone, Global moved 100,000 barrels of oil a day from North Dakota to Albany by rail, said chief executive Eric Slifka. That, he estimated, amounted to a quarter of the products the company transported last month.

Cynthia Scarano, executive vice president for Pan Am Railways, said that increase in crude shipments has helped offset a drop in transporting coal, which has been increasingly replaced by cheaper and cleaner natural gas. “What we have lost in coal we have gained in oil,” Scarano said. “It saved jobs.”

Transporting shale oil via barge and rail has helped the region access cheap supplies, but New England will be able to reap the full benefits of lower-cost domestic oil only by building more pipelines, said Joe Petrowski, head of Cumberland Farms Gulf Oil Group, a major Northeast fuel distributor. Transportation costs, he said, still erase much of the savings from domestic oil.

“What I’m trying to do is get energy prices down for New England,” he said. “The less your average person in Brockton has to spend on gas and heating oil, the more they can spend on a sweater, a vacation, or a sub from Cumberland Farms.”

Erin Ailworth can be reached at eailworth@globe.com. Follow her on Twitter @ailworth.■