

## Companies are removing oil from their products to cut costs

Ronald D. White | May 29, 2012

With crude prices bouncing around above \$90 a barrel, many companies are trying to wring the oil out of their operations.

Ford Motor Co. is using soybean foam in its upholstery. McDonald's Corp. is testing paper cups for hot drinks in place of polystyrene containers, which start out as petroleum. Coca-Cola Co. and PepsiCo Inc. are becoming bioplastic bottlers. And a California cleaning products manufacturer has set out to eliminate diesel from its fleet.

"When oil was cheap, it became pervasive throughout our economy in hundreds and hundreds of invisible ways, as a raw material," said Daniel Yergin, an energy consultant who wrote a Pulitzer Prize-winning history of the oil industry. "Now there are accelerating efforts to squeeze oil out and find ways to substitute for it. That is the power of price."

In 2012, the Energy Department expects U.S. benchmark West Texas Intermediate crude to set a record average above \$105 a barrel. U.S. oil imports based on the price of Brent North Sea oil have been averaging more than \$117 a barrel this year.

"When a company's raw materials come from oil, it's a double whammy," said Bruce Bullock, executive director of the Maguire Energy Institute at Southern Methodist University. "The long-term trajectory of oil is up. It makes sense to get as much oil as possible out of a company's raw materials stream."

The global chemicals market is worth about \$3 trillion annually, according to the American Chemistry Council. Its products can be found in 95% of all manufacturing processes. Much of it involves petrochemicals, which account for about 24% of the crude oil used in the U.S., according to the Energy Department.

"A lot of brand owners, particularly those that rely heavily on packaging, are interested in protecting their long-term costs," said Douglas A. Smock, a plastics analyst who wrote a report for market research firm BCC Research that predicted a boom in plant-based bioplastics. "They want more predictable cost structures going forward. The high price of oil is responsible for the rapid emergence in interest in bioplastics."

Ford said it has eliminated 5 million pounds of petroleum annually by using soybean-based cushions in all of its North American vehicles. The company said it got rid of an additional 300,000 pounds of oil-based resins a year by making door bolsters out of kenaf, a tropical plant in the cotton family.

"Finding alternative sources for materials is becoming imperative as petroleum prices continue to rise and traditional,



less-sustainable materials become more expensive," said John Viera, Ford's global director of sustainability and vehicle environmental matters.

Smaller businesses are making big changes too.

BioSolar Inc. of Santa Clarita dealt every day with the fact that solar modules are typically made with a glass front, an aluminum frame, and a back sheet made out of a petroleum-based plastic or polymer.

"We saw where the price of petroleum was going," BioSolar Chief Executive David Lee said. "That was one of our motivations. We're not economists, but we knew that the price of oil was going to keep going up. The cost of photovoltaic cell manufacturing was going to skyrocket."

BioSolar's process now uses castor beans.

Los Angeles businessman Neal Harris once relied on beads made from a petroleum-based polymer to hold fragrances for his company's products. Harris' company, ScentEvents, sells fragrances as a marketing tool to enhance movie premieres, concerts, parties and products. This year, he'll use ceramic beads 95% of the time.

"It's saving us money, and we no longer have to keep track of oil prices," Harris said.

Saving money isn't the only motivation. Many businesses are responding to younger customers who are concerned about the environment.

"There is a strong generational interest in not using oil," said Amy Myers Jaffe, associate director of Rice University's Energy Program. "And that interest is more ideological than economic. These are people concerned about climate change and the social-justice issues of how the oil industry operates."

San Francisco environmental advocacy group **As You Sow** garnered support last year from 29% of McDonald's shareholders for a proposal urging the fast-food giant to consider "more environmentally beneficial beverage containers." In March, McDonald's began a tryout of double-walled paper hot-drink cups in 2,000 restaurants, mainly on the West Coast.

"McDonald's is striving to reduce, reuse and recycle wherever possible as part of our overall sustainability strategy," McDonald's spokeswoman Heather Oldani said. "We will continue to evaluate the pilot and new cups based on customer feedback."

Method Products Inc. of San Francisco makes a line of home-cleaning items, hand and body cleansers, air fresheners and candles that have earned a following at major retailers, including Target and Costco. Its trucks are decorated with the words "Biodiesel is how we roll." The company even collects used vegetable oil for reuse as fuel.

"We have seven trucks and 18 trailers that run on a minimum of 20% biodiesel," said Drummond Lawson, Method's director of sustainability. "Lowering our costs and our exposure to oil is just part of it. Our other goal is to reduce resource consumption as much as possible in making our products."

With PepsiCo claiming to have developed the first 100% plant-based and renewably sourced plastic bottle last year, Coca Cola developed its own PlantBottle Packaging Project last year. The PlantBottle reduces the use of petroleum-based products compared with traditional plastic bottles by using 30% plant-based materials by using sugar cane — cutting its use of fossil fuels.

Coke aims to use plant-based material in all of its packaging by 2020, said Scott Vitters, general manager of Coca-Cola's