

Is the United States *Really* Set to Surpass Saudi Arabia As Leading Supplier of 'Oil'?

Several organizations have grabbed headlines recently by claiming that the United States has, or is about to, overtake Saudi Arabia as the largest oil producer. Among them is the PIRA Energy Group (www.pira.com), which says "The U.S. is expected to overtake Saudi Arabia as the world's biggest total supplier of oil this year when natural gas liquids and biofuels are added to crude." This claim is cited in a *Bloomberg* news story, "U.S. Becomes World's Top Oil Producer in 2013, PIRA Says," dated October 15, 2013. Apparently the data was presented at a PIRA seminar in New York earlier in October. PIRA issued its own press release on October 22, 2013, claiming the "U.S. Is Now the Largest Oil Supplier in the World."

PIRA attributes some of the growth in U.S. production to shale oil, and there is no doubt that shale oil production is increasing. However, it is not clear where PIRA is getting its data. The most widely accepted source for data on world oil production is the Energy Information Administration (EIA, www.eia.gov), and EIA data tells a somewhat different picture.

The PIRA claim goes on to cite projected figures for 2013. This has to be a projection, since 2013 is not over yet, so the most reliable numbers are the EIA numbers for 2012, which are actual rather than projected. The EIA distinguishes crude oil production from what it calls total oil production, and its numbers for 2012 are as follows:

Petroleum Type	United States	Saudi Arabia
Crude Oil Production – 2012	6,486 thousand barrels/day	9,832 thousand barrels/day
Total Oil Production – 2012	11,114 thousand barrels/day	11,725 thousand barrels/day
Proved Reserves – 2012	26.54 billion barrels	267.91 billion barrels

It is important to understand what the above numbers mean. In terms of crude oil production, the United States is nowhere near Saudi Arabia. The only way to get the United States close to Saudi Arabia is by considering total oil production numbers. Total oil production includes crude oil and condensate, plus natural gas liquids and refinery gain.

Natural gas liquids are liquids that are separated at natural gas processing, fractionating, and cycling plants. Examples include liquefied petroleum gases such as ethane, propane, and butane. It is well known that the United States outranks Saudi Arabia in natural gas production by a substantial amount, although the United States has natural gas reserves that are modestly higher than those of Saudi Arabia. Saudi Arabia doesn't need to produce a lot of natural gas because it has so much oil. So naturally, if you include liquids that are separated out at natural gas processing plants, this would help the oil total of the U.S. when compared to Saudi Arabia.

Refinery gain refers to the additional volume of refined



product that exists after refining and distillation, when this amount is measured volumetrically rather than as mass. The process of catalytic cracking breaks some large molecules into smaller ones, resulting in a slightly greater volume of petroleum fluid than was fed into the refining process. This may create a greater volume of fluid, but the mass of the fluid remains the same. This is not creating more oil; rather, it is creating slightly more refined fuel, measured in volumetric terms.

Counting refinery gain as part of total oil production also favors the United States, since the United States has many more refineries and has more than eight times the refinery capacity than Saudi Arabia. Furthermore, this is not "oil production," it is production of refined fuels that are created from oil that has already been produced. It is also dependent on measuring it volumetrically rather than in mass terms.

What is most objectionable in PIRA's analysis is counting biofuels as oil. Biofuels are made from plant matter and municipal and industrial waste. Biofuels aren't oil, they are a substitute for oil. Yet PIRA counts 1 million barrels per day of biofuels as part of U.S. oil production.

The problem with PIRA's analysis is that when people think of oil production, they think of crude oil production. They are not thinking about refinery gains, biofuels, or even natural gas liquids. And the United States is a long way from overtaking Saudi Arabia in crude oil production. Of course, PIRA doesn't mention reserves because this would work against its analysis. Saudi Arabia has more than 10 times the proved oil reserves as the United States. **FC**

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