

Changing the world: America's tight oil revolution



By **Harold Hamm**

Chairman and Chief Executive Officer, Continental Resources



America has a long history of achieving the impossible. We landed on the moon. We invented the Internet. And now we can add horizontal drilling to the list of American innovations that have changed the world forever.

As chairman of the Domestic Energy Producers Alliance (DEPA) and as CEO of the company that co-developed the first field ever drilled exclusively with horizontal drilling, I was in the unique position to be one of the first to see American energy independence on the horizon three years ago. And as technology continues to advance and new supplies of premium crude oil are discovered, today I see first-hand what is necessary to continue this oil and gas renaissance not only in America, but across the world.

In October 2011, DEPA boldly predicted American energy independence by 2020. America's independent oil and gas producers have unlocked the technology and resources that make this a reality. As a result, we can mark the 40th anniversary of the OPEC oil embargo by ending the era of oil scarcity in America and, along with it, ending the last of the shortsighted regulations passed during that period.

We are entering a new era of energy abundance in America and the world. Until recently, we have only been able to extract hydrocarbons from reservoir-quality rock, primarily through vertical wells. But through technological breakthroughs in precision horizontal drilling, we can develop resources previously thought to be unattainable. It is time for the world to hear the truth about the real source of our modern-day oil and natural gas renaissance – horizontal drilling.

This technology allows us to access 5,000 to 10,000 feet of resource rock compared to just a fraction of that with conventional vertical drilling. Prior to horizontal drilling, we could recover only a small portion of the oil in place in tight reservoirs of low permeability and porosity. With the advent of horizontal drilling, today we can recover much more. The industry foresees that number reaching 10 per cent or more with future technological advancements. We're talking Saudi Arabian numbers here. America now counts its natural gas supply in centuries, and experts including the International Energy Agency agree the US will be energy independent in terms of crude oil within a decade or two.

Not only has horizontal drilling increased America's supply of crude oil, but also it has improved the quality.

Primarily the oil produced through horizontal drilling is light, tight, low-sulphur crude, making it the best quality in the world. It is environmentally friendly, it promotes jobs, it is fuelling a manufacturing and petrochemical industry comeback in America, and we need to make sure we do not disadvantage this high quality oil with refining capacity problems overseas.

In October 2013, America marked the 40th anniversary of the OPEC oil embargo. In the wake of the oil price shock and long gasoline lines that followed this event, a series of federal laws were passed to manage our country's energy supply. This wave of legislative activity proved to be short-sighted and reactionary.

Unintended consequences

The federal laws passed in the 1970s artificially controlled the supply, demand, and price of US energy and brought about unintended consequences. For example, one law even banned the use of natural gas as a boiler fuel and mandated US power plants to switch to a less environmentally friendly alternative, coal. Today America is still struggling to rectify the aftermath of this rash regulation.

In the years since the enactment of these laws, our elected officials have recognised our global energy industry has changed dramatically. Thankfully, in response to these changes, legislators have repealed or let expire nearly all post-embargo regulations save two: the Energy Policy and Conservation Act of 1975 and the Export Administration Act of 1979, which together essentially ban US crude oil exports.

The "scarcity mentality" that led to the creation of these laws no longer reflects the economic reality of the global energy marketplace. Even US Energy Secretary Ernest Moniz acknowledged recently that oil exports deserve a second look in the face of our nation's dramatic supply-demand rebalancing.

The popular belief is that the US is not exporting petroleum. Nothing could be further from the truth. Major refining companies are exporting refined petroleum products like gasoline and diesel with no limitations to the tune of 4 million barrels a day (mb/d) (see EIA graph below). Why shouldn't independent producers be allowed to do the same? Are we to be their milk cows? This would be like telling American farmers they cannot export their wheat, yet allowing Pillsbury to export all the flour they want.



Over the years, some have argued granting US crude oil producers free access to world markets would drive up the cost of gasoline and other petroleum products for American consumers. The opposite is actually true. By imposing trade restrictions on a single segment of the energy industry, namely domestically produced crude, our government is arbitrarily subsidising some US refineries by giving them the ability to source American oil at prices well below the world market price, while at the same time giving them the “green light” to sell petroleum products into higher-priced international markets.

Energy independence is working – US gasoline and diesel prices are down 20 per cent. But America’s oil and gas renaissance is in jeopardy. These outdated crude export restrictions have prevented domestic oil exploration and production from achieving its full potential – slowing potential job growth, restricting supply, and negatively affecting global refined product balances, which sends the wrong message to our trading partners around the world. Many refineries overseas, designed to only process light, sweet crude similar to US grades, find it difficult to compete profitably with US refiners with access to domestic crude at artificially low prices, forcing many to close and thereby reducing supplies of refined products on the global market. This effectively raises prices for consumers in the US and all around the world. Many refineries in the Caribbean, Europe, India and South America are closing or operating at sub-optimal levels as they cannot compete with US refiners running on discounted domestic crude oil. And, when supplies of gasoline and diesel fuel are restricted in the global market, the global demand for US gasoline and diesel increases, thereby driving up the price US consumers must pay at the pump.

Indeed, crude oil is no different than any other commodity, product, or service demanded by consumers. Lower prices are only brought about by increased supply, greater competition amongst sellers, weaker

demand, or improved efficiency in the manufacturing and distribution process. When governments attempt to legislate lower prices through regulations, no matter how well-meaning the laws may be when introduced, market distortions and unintended consequences inevitably result; supply and competition among producers is rendered short of potential, and the consumer ends up paying higher prices at the gasoline pump and in their monthly energy bills.

Let us export our US crude

American energy independence does not mean being isolationist. As we have seen before, closed societies do not work. Energy independence means energy security. It means a chance for America to step back into a global leadership role by creating a world of balanced interdependency as opposed to dysfunctional interdependency. And it means no one can choke off supply, turn on the tap, or otherwise distort the market.

The world has drastically changed since the OPEC oil embargo and reactionary enactment of US federal regulations in the 1970s. Even then the ban was symbolic, as we had no oil to export. Americans and consumers of all nations would benefit from the immediate lifting of restrictions that inhibit the export of crude oil produced in the US. ■

Monthly petroleum product gross exports (mmbbl/d)

