

THE ROLE OF INNOVATIVE PETROLEUM PRODUCTION TECHNOLOGY IN SUPPORT OF DONALD TRUMP'S STRATEGIC PLAN FOR US ENERGY INDEPENDENCE



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A coalition of oil-producing countries (OPEC and non-OPEC) agreed to limit petroleum output and exports beginning January 1 of this year. It is hoped that most petroleum exporters will comply with this agreement, putting an end to years of market uncertainty by first stabilizing prices at their current level and then initiating a gradual upward trend.

On the other hand, the prospect of new pressures and intensified competition in the world oil market could increase the risk of a breakdown of all existing agreements and launch a new spiral of volatility and plummeting oil prices.

What follows is a brief analysis of risks and prospects in the North American market. ACCORD GR Energy, Inc., a West Texas E&P operator, that builds its strategy around frontier EOR (enhanced oil recovery) technologies, will serve as an example of growth and development in a highly competitive environment.

The period from October 2014 through 2016 will be remembered as a time of steep drops followed by wide fluctuations in the oil market, which resulted in the bankruptcy of a large number of oil companies and caused severe, if not catastrophic, damage to the economies of oil-producing nations.

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US president Donald Trump

For example, the Brent price at the very start of last year was less than \$30/barrel, after which it rose and fell in response to a variety of factors. At the end of last year, OPEC and a group of non-OPEC oil-producing countries agreed to limit production in a coordinated way in order to bring output and exports into alignment with current and projected levels of regional demand.

However, it must not be forgotten that price stabilization remains speculative in nature, based as it is on the expectation that major players in the market will retain their commitment not to exceed specified levels of output and export. But as history has shown, this hasn't always been a good bet – not by a long shot.

The market price is, of course, a product of supply and demand. However, the history of cartels provides ample evidence that if supply exceeds demand owing to a failure on the part of oil-producing countries to execute their agreements in good faith, or as a result of overly optimistic forecasts of future demand, existing agreements will break down, launching a new race to increase production. In such cases, prices will inevitably spiral downward.

However, the reader should consider another factor that while local in nature, exerts a profound influence on the behavior of the global petroleum industry and energy market.

One of the world's largest energy producers and consumers is the United States, which does not participate in international agreements to regulate oil output. On the other hand, US policies regarding the production, export and import of oil and petroleum products impact the world market in a major way.

The shale revolution and subsequent large-scale development of shale plays in the US has not only contributed to, but has been a major cause of the disbalance between output and demand that has led to market volatility and ultimately a free-fall in the world oil price and a de facto restructuring of the global oil industry. This process has only begun, and may soon receive a new impetus.

On January 20 of this year, Donald Trump was sworn in as the 45th president of the United States. During the campaign, his "America First" energy plan was made available for all to see on his website.

Key elements of the plan, or Donald Trump's energy vision for America:

- Make America energy independent, create millions of new jobs, and protect clean air and clean water. We will conserve our natural habitats, reserves and resources. We will unleash an energy revolution that will bring vast new wealth to our country.
- Declare American energy dominance a strategic economic and foreign policy goal of the United States.
- Unleash America's \$50 trillion in untapped shale, oil, and natural gas reserves, plus hundreds of years in clean coal reserves.
- Become, and stay, totally independent of any need to import energy from the OPEC cartel or any nations hostile to our interests.
- Open onshore and offshore leasing on federal lands, eliminate moratorium on coal leasing, and open shale energy deposits.
- Encourage the use of natural gas and other American energy resources that will both reduce emissions but also reduce the price of energy and increase our economic output.
- Rescind all job-destroying Obama executive actions. Mr. Trump will reduce and eliminate all barriers to responsible energy production, creating at least a half million jobs a year, \$30 billion in higher wages, and cheaper energy.

Source : <https://www.donaldjtrump.com/policies/energy>

The planned reduction in corporate taxes from 35 to 15% will be a boon to petroleum companies, and will doubtless make US products more competitive on the world market.

This policy will also strongly incentivize development of the domestic industry by reducing the overall cost of oil production in the US.

Thanks to shale-oil fracking technology, the US has become a world leader in hydrocarbon production. Increased US oil production has reduced the country's dependence on imports and has allowed it to raise its level of exports, a development that has seriously impacted the world petroleum market in the form of lower prices.

Not long ago, the media began to report enthusiastically about the giant Wolfcamp shale deposit in Texas with potential reserves totaling up to 20 billion barrels of oil, 450 million cubic meters of natural gas and 1.6 billion barrels of liquefied natural gas. The Permian Basin, with which the field is associated, is served by well-developed infrastructure, is located near major refineries, and is characterized by a relatively low cost of oil recovery. Given the right conditions, the Wolfcamp property could be brought into development in the very near future.

Researchers at Rice University in Houston have shown that America currently boasts about two trillion barrels of recoverable oil reserves, enough to meet production targets for 283 years, along with sufficient natural gas reserves for centuries of use.

According to Goldman-Sachs, during the period from 2017 through 2019, American oil output could surpass that of Saudi Arabia and Russia, making the US the dominant force in global oil production and exports.

But it may also be said that reserves that are currently accessible from a CAPEX standpoint and can be profitably recovered, treated and transported from an OPEX standpoint, represent only the beginning. America could successfully develop these resources in a much shorter time band than 283 years, with more to spare.

A significant rise in US oil production, accompanied by a decline in domestic imports, would place the country among the growing leaders in oil exports, engender strong competition in the export market, and as a natural result of such competition, lead to a reduction in prices.

ACCORD GR Energy owns a position of the oil reserves at the Permian Basin. Having obtained extraction technology for the development of extra shallow oil and bitumen reserves under license from GALEX Energy, the company is well positioned to take advantage of this opportunity.

In addition to shallow oil development, ACCORD GR Energy maintains a broad spectrum of other interests and technological capabilities.

More specifically, one of the company's main lines of business focuses on shallow accumulations of high viscosity oil and natural bitumen. The reasons for this are as follows:

the low cost of resource acquisition, low production-related CAPEX, and the low projected OPEX for oil recovery and treatment. Resources of this type adjacent the ACCORD license area amount to billions of barrel-equivalents to North American “conventional oil”.

Pilot trial of the extraction method at Wardlaw field in 2016, designed to test the company’s licensed SWEPT wave technology, proved that previously unrecoverable reserves can be profitably produced from extra shallow reservoirs (<100 meters). The stated purpose of wave technology is to enhance the permeability of reservoir rock by opening and joining rock pores and making the oil dissipated in these pores immediately available for recovery to meet and maintain field testing standards.

The next step in this process is to create a mechanism whereby oil in place is directed towards the wellbores of producing wells. Various approaches are widely used in the industry for this purpose (SAGD, SCI, THAI), along with an adaptation of Accord’s licensed S-BRPT technology, which has been developed for Utah’s Asphalt Ridge property based on original SISG protocols developed by GALEX Energy. Analysis has shown that standard technologies are too expensive and ineffective in the conditions of Wardlaw field.

S-BRPT technology, licensed to ACCORD by agreement with GALEX Energy, is designed to produce oil from hard asphalt. The process provides for underground gasification of crude oil with subsequent re-synthesis at the surface to meet desired specifications.

Since Wardlaw oil is non-viscous and requires no upgrading or synthesis to make it commercially viable, key components of this technology are not required by local conditions, and therefore, the process is financially unjustifiable and represents technological overkill.

The S-BRPT has undergone complete recreation, so more cost-effective, thermobaric production technology designed to mobilize oil contained in micro-domes and other localized targets has been developed for use at Wardlaw and throughout the Permian basin and beyond. Testing performed in September 2016 indicated the huge potential of this technology with respect to efficient oil recovery in challenging conditions.

Based on the observed results, one ACCORD board member, former BP vice president Randal Pruitt, exclaimed, “This is bigger than fracking!”

The company is currently engaged in field testing wells drilled in support of this technology. Additional wells will be drilled and testing will be performed to acquire more data and eliminate any doubts regarding the casing and grouting integrity of older wells.

The results obtained from this effort will provide the raw data needed to plan full-scale development of the field and the basin as a whole.

The company plans to initiate production at Wardlaw in the first quarter of 2017, while expanding its interest in the Permian basin through the acquisition of new prospects. All necessary conditions are present to attain these goals, not the least of which is Donald Trump's strategic plan for US energy independence.

Trump's plan includes a significant relaxation in burdensome regulations that have hamstrung exploration and production for the last eight years. Federally owned properties, both onshore and offshore, will be made available for private development and much of the red tape in obtaining approvals for new energy projects will be eliminated.

From the standpoint of US producers, one of the most welcome components of Trump's plan is its cancellation of unnecessary regulatory restrictions, including unattainable environmental standards, imposed on the industry during the Obama administration. The plan will also make several previously off-limits areas available for drilling and exploitation and simplify the introduction of new, state-of-the-art technologies.

Trump's victory may very well spark a resurgence of the US petroleum industry. The other side of the equation is that his reforms will most likely stimulate a new round of stiff competition, both in the US and around the world, which will inevitably result in falling oil prices.

As we have noted elsewhere, the primary challenge of private companies and the government under these circumstances is to achieve and maintain profitability at the worst-case oil price.

The ACCORD management believes that it is well prepared for such an eventuality by viewing it less as a problem than as an opportunity for renewed growth.

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