

ECONOMIC VIEWPOINT



United States: Just Steps Away from Energy Independence

During the last week of November, the United States saw its crude oil and petroleum product exports exceed its imports for the first time since the Energy Information Administration (EIA) began recording this data. This weekly figure does not yet establish a trend, but it does reveal a paradigm shift in the U.S. energy situation. U.S. energy independence, a key policy since the 1970s, appears to be within reach. While the boom in shale oil and gas production improved the U.S. energy balance considerably, crude oil imports, excluding petroleum products, are expected to continue to outstrip exports in the coming years. A more detailed picture of the U.S. energy situation will provide a slightly better understanding of where the country stands with respect to its goal of independence in the industry.

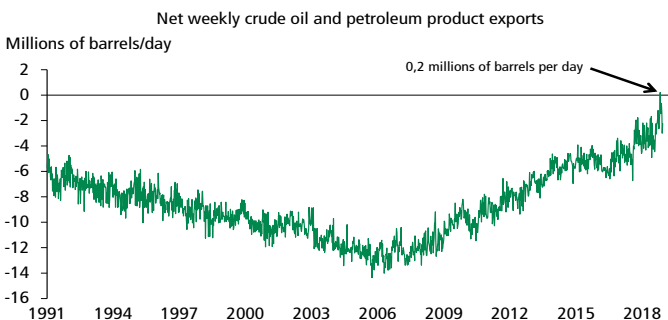
The criterion often used to define energy independence is a positive trade balance of energy products, including coal, natural gas, oil and petroleum products—in other words, higher exports than imports. In this context, a country would be less vulnerable to external shocks that could restrict or stop energy product imports. Reducing imports to zero would, in theory, correspond to total independence, but that would be impossible in practice, and the economic cost would be enormous given the established international trade chains. During the last week of November 2018, the United States had a positive crude oil and petroleum product trade balance (graph 1), a first to our knowledge. This weekly figure was small and fell back down below zero the

following week, but it shows that the United States' role in the oil market is shifting and that the country is becoming less dependent on foreign oil.

Why Seek Energy Independence?

The goal of U.S. energy independence has been pursued by every administration since President Richard Nixon introduced it into policy in 1973. In the 70s, the United States was becoming increasingly dependent on foreign oil, as its net crude oil imports rose from 1 mbd (million barrels per day) in 1960 to more than 6 mbd by the end of that decade. From October 1973 to March 1974, the Organization of the Petroleum Exporting Countries (OPEC) imposed an embargo on its oil exports to the United States, among other countries, in addition to cutting output, in retaliation for the United States' involvement in the Israeli–Palestinian conflict. During this period, U.S. crude oil imports declined approximately 40%. Before the embargo, that same year, OPEC represented on average 64% of U.S. crude oil imports, 48% if petroleum products are also included. This move severely affected the U.S. economy. The price per barrel of Brent oil more than quadrupled in one year, which led to gasoline shortages in some places and sent prices at the pump soaring (graph 2 on page 2). This spiked inflation and deepened the 1970s recession in the United States (graph 3 on page 2). The second oil shock caused by the Iranian Revolution of 1978–1979 also penalized the U.S. economy and strengthened the United States' resolve to protect itself from external shocks in the energy industry, especially with regard to oil.

GRAPH 1
U.S. petroleum exports briefly outstripped imports at the end of November 2018



Sources: Energy Information Administration and Desjardins, Economic Studies

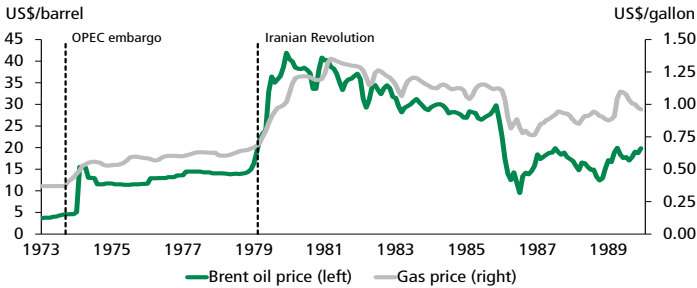
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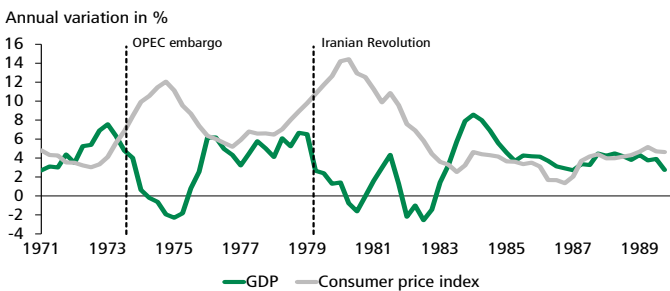
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GRAPH 2
The two oil crises had a significant impact on crude oil and gasoline prices in the United States



OPEC: Organization of the Petroleum Exporting Countries
Sources: Datastream, Energy Information Administration and Desjardins, Economic Studies

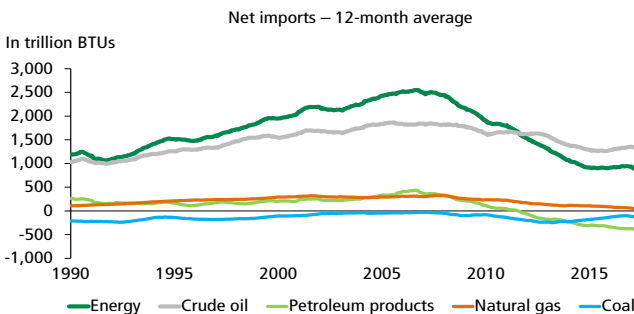
GRAPH 3
The spike in oil prices penalized the U.S. real economy



OPEC: Organization of the Petroleum Exporting Countries
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics and Desjardins, Economic Studies

Since then, U.S. administrations have tried to promote the development of their energy industry. Technological advances in shale oil and gas truly marked the point at which the U.S. energy trade balance began to improve in all its components (graph 4). As shown in an issue of our [Economic Viewpoint](#), natural gas production has exceeded consumption in the United States,

GRAPH 4
The U.S. trade balance improved considerably in energy products



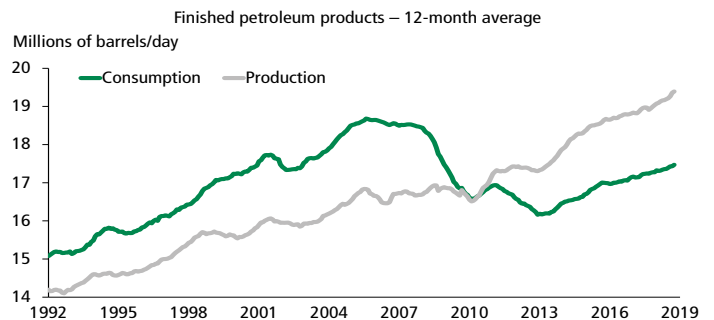
BTU: British thermal units
Sources: Energy Information Administration and Desjardins, Economic Studies

allowing the country to become a net exporter as of 2017. This suggests that natural gas independence has been achieved. What about the oil market?

An Increasingly Larger Role in the Global Oil Market

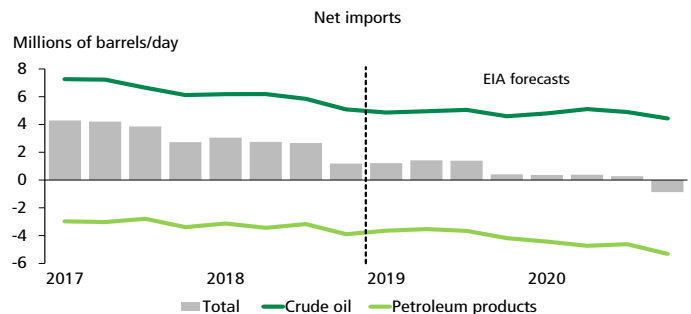
The United States achieved a trade advantage in petroleum products in 2011, when it became a net exporter. U.S. production of finished petroleum products also far exceeded consumption (graph 5). Since then, the petroleum trade deficit has continued to shrink. The EIA also expects the United States to become a net petroleum exporter, including finished products, by the end of 2020 (graph 6). However, the country would remain dependent on crude oil imports to meet refinery demand. To produce all that the United States consumes and exports in finished products, U.S. refineries currently need about 17 mbd of crude oil (graph 7 on page 3). The country has seen its oil output skyrocket since 2008, especially with innovations in shale mining. In 10 years, U.S. crude oil production increased from around 5 mbd to more than 11 mbd, making the United States the world's top producer. Its oil production continues to grow rapidly, with the EIA expecting it to reach almost 13 mbd in 2020. This

GRAPH 5
Production of finished petroleum products now exceeds consumption in the United States



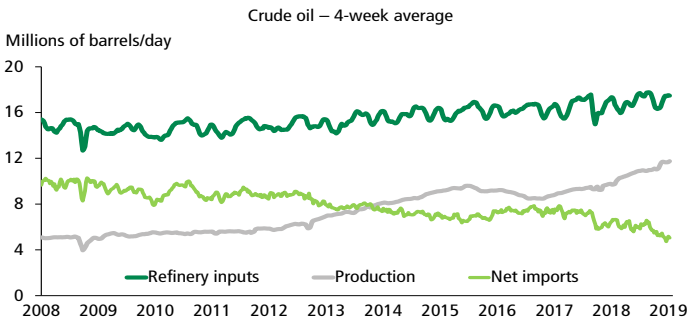
Sources: Energy Information Administration and Desjardins, Economic Studies

GRAPH 6
Including petroleum products, the United States could soon become a net petroleum exporter according to the EIA



EIA: Energy Administration Information
Sources: EIA and Desjardins, Economic Studies

GRAPH 7
Strong crude oil production in the United States is increasingly meeting U.S. refinery demand



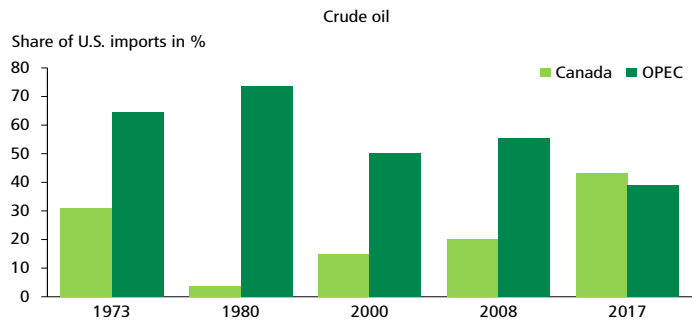
Sources: Energy Information Administration and Desjardins, Economic Studies

surge in crude oil production would help lower net imports even further, but would not be enough to end the country's dependence on foreign crude oil.

Independence in the Oil Market Is a More Nuanced Issue

It is difficult to talk about energy independence when it relates to crude oil because the market is widely integrated. Unlike natural gas, which is, for the time being, affected to a greater extent by regional factors, the price of oil is set internationally and is driven by global supply and demand. Therefore, even if the United States produced enough to meet domestic demand, an output restriction in other major producers would affect prices considerably. We saw this in 2015 and even more recently when OPEC decisions regarding its output levels had a major impact on oil and gasoline prices in the United States and around the world. As much as the attempt by OPEC members to stifle U.S. producers by overproducing led to the collapse of oil prices in 2015, their agreement on production cuts with Russia also has brought prices back to more preferable levels for them recently. The importance of cooperation between producers in the oil market was also brought to the fore by OPEC's support in response to the U.S. sanctions against Iran. Still, the United States is far less vulnerable to external shocks now than it was in the 70s: petroleum trade balance has significantly improved, its important production can now influence market prices, its crude oil and petroleum product inventories are much higher,

GRAPH 8
OPEC's influence in the United States has decreased since the last two oil crises



OPEC: Organization of the Petroleum Exporting Countries
 Sources: Energy Information Administration and Desjardins, Economic Studies

and its imports from OPEC countries have decreased in favour of Canada (graph 8), an economic and political ally. An increase in Canadian crude oil supply to replace oil from OPEC countries in the U.S. market was also proposed in the past as a solution to the United States' energy independence issue. Events such as those of 1973 and 1979 would have far less of an effect on the U.S. real economy today.

The issue of energy independence is weighing heavily on the U.S. political and economic agenda. The shale oil and gas boom has certainly enabled the country to enjoy greater independence, and EIA predictions suggest that this trend will continue. The highly intergrated crude oil market nonetheless implies that the United States, and other oil producers, will remain sensitive to external shocks even after reaching net exporter status. However, because of the size of its oil production, the United States wields more power to respond to the potential use of oil as a political tool.

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