



Statement of the U.S. Chamber of Commerce

ON: The Impacts and Future of North American Energy Trade

**TO: U.S. House Committee on Energy and Commerce
Subcommittee on Energy**

DATE: December 13, 2017

The U.S. Chamber of Commerce is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations. The Chamber is dedicated to promoting, protecting, and defending America's free enterprise system.

More than 96% of Chamber member companies have fewer than 100 employees, and many of the nation's largest companies are also active members. We are therefore cognizant not only of the challenges facing smaller businesses, but also those facing the business community at large.

Besides representing a cross-section of the American business community with respect to the number of employees, major classifications of American business—e.g., manufacturing, retailing, services, construction, wholesalers, and finance—are represented. The Chamber has membership in all 50 states.

The Chamber's international reach is substantial as well. We believe that global interdependence provides opportunities, not threats. In addition to the American Chambers of Commerce abroad, an increasing number of our members engage in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

**Subcommittee on Energy
Energy and Commerce Committee
United States House of Representatives**

**THE IMPACTS AND FUTURE OF NORTH AMERICAN ENERGY
TRADE**

**Testimony of
Hon. Karen A. Harbert
President & CEO
Global Energy Institute
U.S. Chamber of Commerce**

Wednesday, December 13, 2017

Thank you, Chairman Upton, Ranking Member Rush, and members of the Committee. I am Karen Harbert, president and CEO of the Global Energy Institute (GEI), an affiliate of the U.S. Chamber of Commerce, the world's largest business federation representing the interests of more than three million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations, and dedicated to promoting, protecting, and defending America's free enterprise system.

The mission of the GEI is to unify policymakers, regulators, business leaders, and the American public behind a common sense energy strategy to help keep America secure, prosperous, and clean. In that regard we hope to be of service to this Committee, this Congress as a whole, and the administration.

STRATEGIC CONTEXT

The United States, Canada, and Mexico have a long history of shared energy trade and cooperation. For most of that time, as a global economic leader and large energy user, the United States has relied on large supplies of oil and natural gas from both nations, who have been happy to supply it. Although an energy trade imbalance has been the norm, trading energy with our neighbors to the north and south provides tremendous benefit to the United States' economic and energy security.

Today, the U.S. has the largest hydrocarbon resource base in the world (only Russia comes close),¹ plus very large nuclear and renewable resources. We have always had an abundance of coal, and now thanks to the application of hydraulic fracturing, horizontal drilling, and advanced seismic imaging, the United States is tapping our huge reserves of oil and natural gas and making us the world's largest producer of these fuels and second largest producer of coal.

The rapidity with which the United States has moved from energy scarcity to energy abundance has been nothing short of breathtaking—so fast, in fact, that our energy policy remained mired in a mindset of scarcity, a paradigm that is no longer valid. In short, our energy policy and regulations are only now just catching up with our new energy reality.

The United States also is fortunate to have two neighboring countries, Canada and Mexico, that are themselves large energy producers (Canada ranks 8th globally in hydrocarbon resources and Mexico 24th). North America's abundant energy resources are upending the global energy market. In the U.S., this newfound abundance creates millions of well-paying jobs and new industries, and strengthens our nation's economy and long-term energy security. With the right policies in place, the U.S. and all of North America have the opportunity to have the greatest influence on the global energy marketplace to the greater benefit for our region.

Many experts now believe energy self-reliance for North America, if not for the United States, actually may be within reach in the coming decade. The Trump Administration's actions and commitment to provide regulatory reform for the energy sector are moving us closer to that goal. With the right policies, the United States, Canada, and Mexico can move to strengthen our ties and cement North America's status as an energy superpower.

NORTH AMERICAN ENERGY CONTRIBUTES TO U.S. AND GLOBAL ENERGY SECURITY

North America is a big player in world energy markets. Combined production from the United States, Canada, and Mexico accounts for 19% of crude oil, 28% of natural gas, and 12% of coal output globally.

According to the Energy Information Administration (EIA), petroleum fuels will remain the largest energy source worldwide for decades into the future. Its latest *International Energy Outlook*² projects that energy demand between 2017 and 2050 is expected to grow by about 57% worldwide, most of which will come in developing countries. Combined petroleum, natural gas, and coal use is forecast to grow 29% by 2050, with natural gas leading the way (up 67%) followed by petroleum (25%) and coal (3%). The total share of global energy demand met by hydrocarbons is expected to account for 77% in 2050, down a small amount for the current figure of about 83%. The increased competition for fuels in the coming decades underlines the

¹ Congressional Research Service. 2010. *U.S. Fossil Fuel Resources: Terminology, Reporting, and Summary*.

² EIA. 2017. Annual Energy Outlook 2017. Available at: <https://www.eia.gov/outlooks/ieo/>.

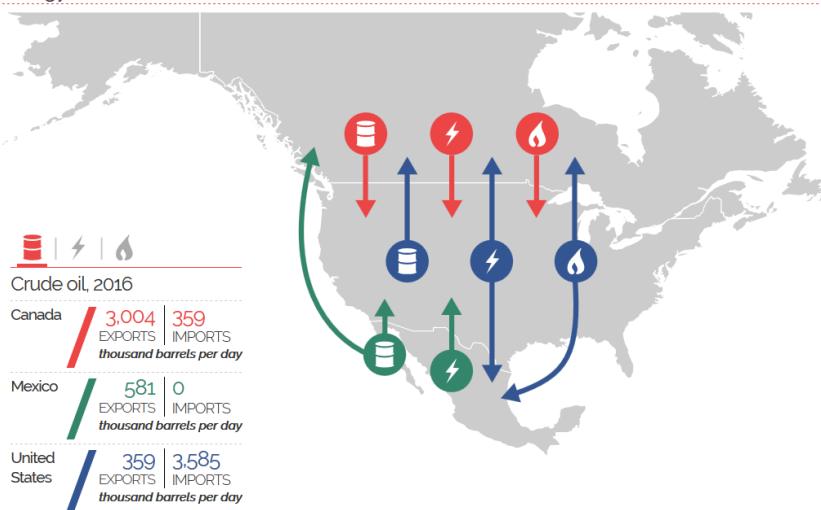
importance of having a stable and secure regional energy market like we have in North America, especially in oil and increasingly in natural gas.

Having a large share of world production in North America not only helps our own energy security, it also helps global energy security by diversifying supplies and by ensuring that a large share of global output occurs in reliable countries that will not use energy as a geopolitical weapon. GEI has taken a close look at energy supply issues and how they impact U.S. and international energy security as part of our *Index of U.S. Energy Security Risk and International Index of Energy Security Risk* studies.³ One way to look at the supply risk for oil, for example, is to measure how much of the global oil supply is in the hands of potentially politically unstable countries. Using Freedom House rankings of civil and political liberties, we have calculated the share of crude oil supply produced in countries Freedom House classifies as Free, Partly Free, and Not Free. Since 1980 oil production in Not Free and Partly Free countries generally amounted for between 60% and 70% of global output. At a time when North Sea oil output is falling, large emerging economies are growing into large oil consumers, putting pressure on global spare oil production capacity and political stability in many producing countries also is on the rise, greater output from North America is needed and welcome.

NORTH AMERICAN ENERGY TRADE

In the years since NAFTA was negotiated, the North American energy sector has been fundamentally transformed. Given our proximity to such large and secure energy resources, it is not surprising that Canada and Mexico are among America’s largest energy trading partners, as the map from North American Cooperation on Energy Information, in which EIA participates, suggests (Figure 1).

Figure 1.
Energy flows within North America



Source: North American Cooperation on Energy Information

Total primary energy production and consumption are about in balance in North America today. Canada produces more energy than it consumes, the United States produces less energy than it consumes, and Mexico produces about the same amount of energy it consumes. There are, of course, differences when individual fuels are considered. Nevertheless,

³ Available at: <https://www.globalenergyinstitute.org/energy-security-risk-index>.

it is clear that North America is both a huge energy consumer and producer, and energy production in particular is expected to increase in the coming years.

The integrated nature of the North American fuel and electricity markets enhances the flexibility, reliability, and cost-effectiveness of the energy supply and distribution system for American consumers, business, and industry.

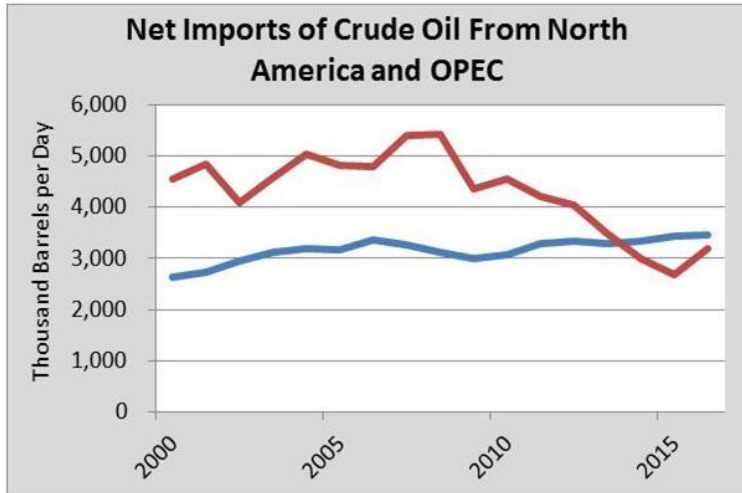
Pipeline, rail, truck, marine vessels, and transmission lines carry crude oil, refined petroleum products, natural gas, and electricity across borders to distribution channels that supply communities across the continent. Crude oil, refined products, natural gas, and natural gas liquids move north and south through more than sixty cross-border pipelines to satisfy markets. Of course, the pending Keystone XL pipeline project has brought much attention to our energy relationship and crude imports from Canada. U.S. natural gas pipeline export capacity is expected to double by 2018 with the completion of six new pipelines to Canada. Transmission lines also transmit electricity north and south across borders, primarily between the U.S. and Canada, but increasingly between the United States and Mexico as its electricity market grows. Today there are 36 major transmission interconnects between the United States, Canada, and Mexico.

We have always had a very open energy trade and investment relationship with Canada, and while our trade relationship with Mexico has traditionally been strong, Mexico has long prohibited foreign investment in its hydrocarbon sector. But that, too, has changed. To combat rapidly declining production since 2004, the Mexican government in 2013 instituted constitutional reforms to put an end to the more than 70-year monopoly enjoyed by state-owned oil company Petroleos Mexicanos (Pemex was nationalized in 1938) and to open up its hydrocarbon sector to competition. Under these reforms, U.S. and other foreign companies will be able to share in profits from production. The move is designed to attract investment in shale oil deposits, which EIA pegs at about 30% greater than the country's proven oil reserves, and ultra-deep water basins in the Gulf of Mexico. The United States and Mexico also completed the Transboundary Hydrocarbons Agreement in 2012, settling a decade-long dispute in an offshore area straddling the two borders that will open up more than 1.5 million acres of the Gulf to joint oil and gas development by Pemex and U.S. oil companies. These reforms promise to boost sagging Mexican oil production and integrate North American markets further.

Whereas the United States traditionally has been a big purchaser of North American energy, it is rapidly becoming a large supplier of crude oil, refined petroleum, and natural gas. These trends are discussed below. To avoid confusion and to make them comparable, note that the charts in the following discussion of energy trading measure *net imports*. This means that a negative number implies the United States exports more than it imports. Unless otherwise noted, all data are from EIA and all dollar figures are in constant 2015\$.

- **CRUDE OIL SUPPLY:** The United States is today a net importer of crude oil both from Mexico and Canada. In 2016, the United States imported about 580,000 barrels per day (b/d) from Mexico and nearly 2.9 million b/d from Canada. These amounts have been growing from

Figure 2.



Source: Energy Information Administration

North America and 37% from OPEC. Today, those numbers are nearly back where they were in 1973, with North America providing almost 80% of our crude oil supply and OPEC 20%. This is a remarkable turnaround in such a short period of time. Much of that was because of increased U.S. production, but the share of our imported oil from North America also increased. Figure 2 shows the rising trend in net crude oil imports since 2000 from North America (Canada and Mexico) and since around 2008 the declining trend from OPEC.

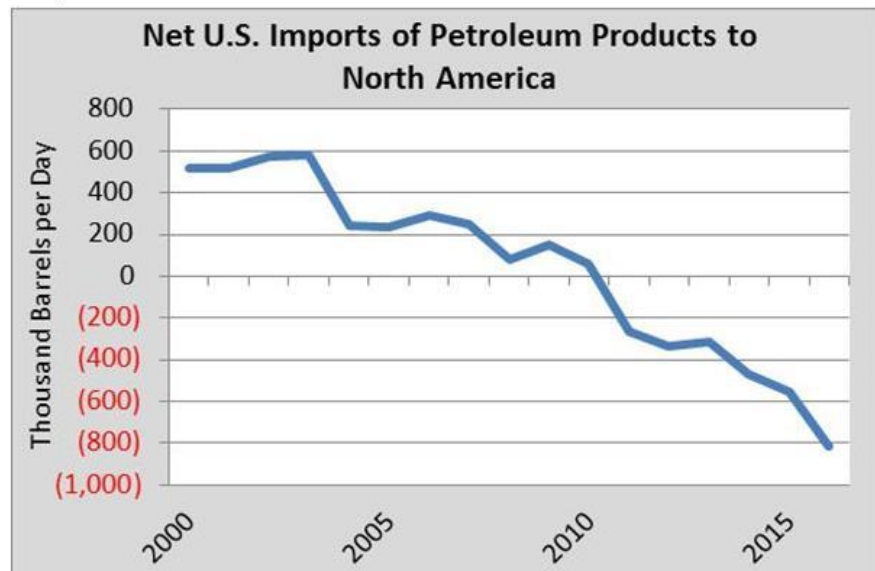
- REFINED PETROLEUM PRODUCTS:** Since 2011 the United States has been a net exporter of refined petroleum products. There is a lively trade in products among the United States, Canada, and Mexico. Recent trends are very favorable to the United States. In 2000, net imports of products to the United States from Canada and Mexico combined were about 520,000 b/d. Today, the United States is a net exporter of product to the tune of about 800,000 b/d (Figure 3), and that is set to increase.

- NATURAL GAS:** Although the United States is a net importer of natural gas from Canada and Mexico, that is not expected to last much longer. Figure 4 illustrates the steady decline in net imports of

Canada, which has seen its domestic crude oil production rise, and decreasing from Mexico, which has seen its crude oil output decline sharply since 2004.

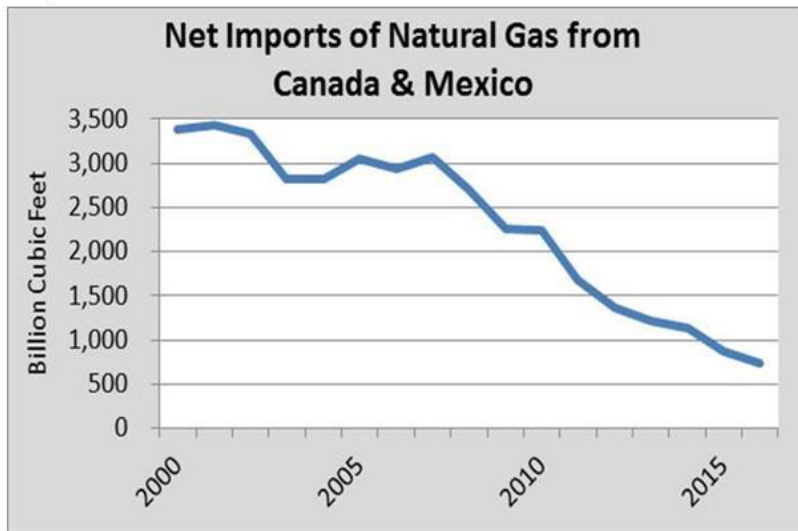
On the eve of the Arab Oil Embargo of 1973, 82% of the U.S. crude oil supply—defined here as domestic production plus net imports—came from North America and 18% came from the Organization of Petroleum Exporting Countries (OPEC). By 2008, the United States was getting just 55% of its supply from

Figure 3.



natural gas since about 2007. The United States has been a net exporter of gas to Mexico since the mid-1980s. In the last couple of years, however, the amounts have grown tremendously, growing from about 300 to 400 billion cubic feet (bcf) on the early to mid-2000s to 1,400 bcf in 2016. During the same time, net imports from Canada have shrunk from nearly 3,500 bcf in the mid-2000s to 2,150 bcf in 2016. As more infrastructure is added linking the U.S. and

Figure 4.



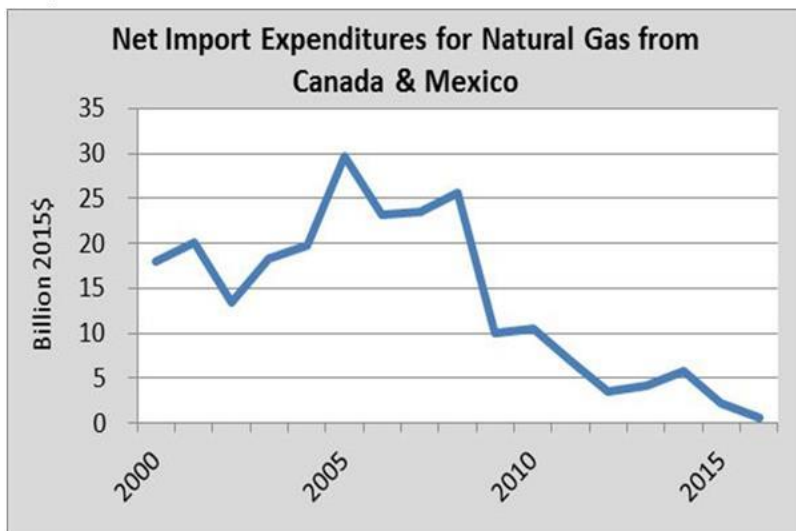
Source: Energy Information Administration

Canada and Mexico, we expect that the U.S. will be a net exporter to both countries. (Much of Canadian imports are to northern states not served by domestic infrastructure.)

Added to these trends in the North American natural gas trade is the fact that the United States generally pays less for natural gas coming from Canada and Mexico than Canada and Mexico pay for U.S. gas. The result is that U.S. import expenditures for natural gas are much lower than in the past (Figure 5). Since their peak of nearly \$30 billion in 2005, U.S. net expenditures for natural gas have declined to below \$600 million in 2016. We expect that in the future, U.S. net expenditures for natural gas with Canada and Mexico will be negative—that is, revenues from the sale of U.S. natural gas to Canada and Mexico will be greater than the

revenues those two countries will receive from the United States to purchase their natural gas.

Figure 5.



Source: Energy Information Administration

- **COAL:** The United States is a net exporter of coal to Canada and Mexico. Volumes of coal to these countries has declined considerably over the last decade primarily because of reduced demand for U.S. coal in Canada, which declined from nearly 18 million short tons in 2006 to about 4 million tons in 2016. Over the

same period Mexican demand for U.S. coal has increased from about 570,000 to just over 3 million short tons. In 2016, these two countries accounted for 13% of total U.S. net coal exports, enough for a \$440 million trade surplus. The downward trend in coal exports to these two countries is expected to continue. U.S. exports to other regions of the world, however, are expected to grow.

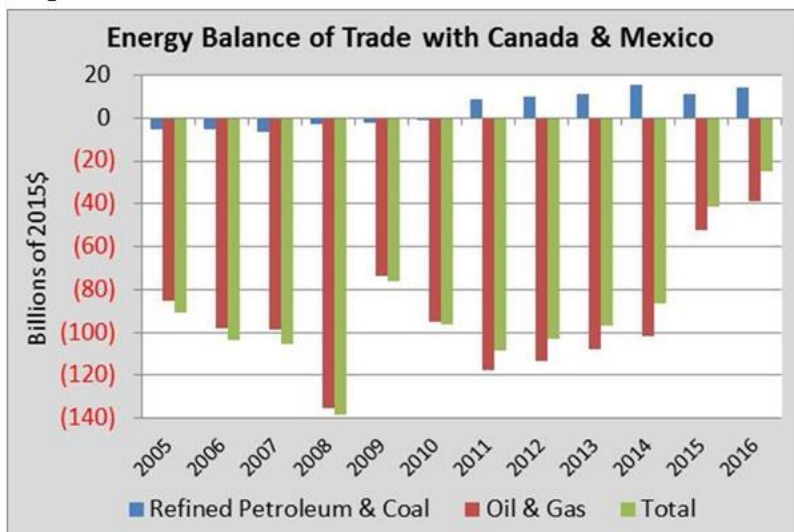
- **ELECTRICITY:** Although the electricity trade among the United States, Canada, and Mexico is small, it is important regionally. The United States is a net importer of electricity from Canada and Mexico, more than 90% of which comes from Canada (much of which is from renewable sources). The electric transmission systems linking Canada and the United States are highly integrated, especially in the Northeast. There are 25 transmission crossings between the United States and Canada and 11 crossings between the United States and Mexico.

EIA reports that the major electricity trade flows from Canada to the United States occur from Manitoba to the Midwest and from eastern Canada to the New England, New York, and Midwest regional transmission organizations. The large output from hydroelectric stations in the Pacific Northwest, however, makes this U.S. region an exporter to Canada, especially during spring melts that swell reservoirs. From 2008 to 2016, net imports of electricity from Canada and Mexico have grown from about 0.8% of total U.S. sales to 1.6%.

- **ENERGY TRADE BALANCES:** More and more of U.S. energy dollars spent in North America are being spent in the United States as a result of the trends discussed above. The U.S. Census Bureau publishes energy trade statistics, and these can be used to calculate balances of trade. In the chart below, we have North American trade data for two energy categories: (1) refined petroleum and coal; and (2) [crude] oil and gas.

For six years, we have been running a trade surplus with Canada and Mexico in refined petroleum and coal (Figure 6). (Note that in the chart, a positive number indicates a trade surplus, a negative number a trade deficit.) Also in the past six years, the trade deficit with these countries in oil and gas has been shrinking rapidly.

Figure 6.



Combined (the green bars), the net energy trade deficit declined from just shy of \$110 billion in 2011 to \$25 billion in 2016, a drop of three-quarters.

Source: Energy Information Administration

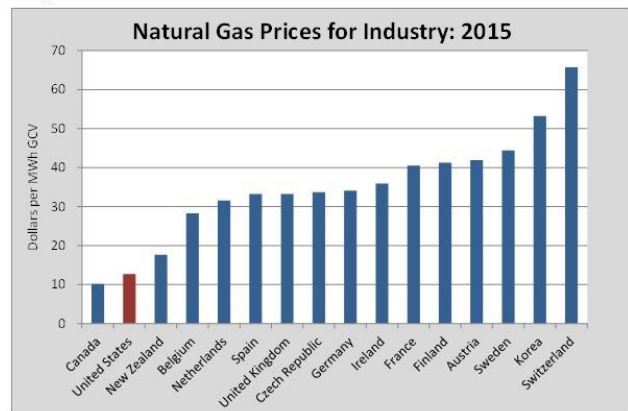
AMERICA'S ENERGY EDGE

The abundance of affordable energy in North America, led by America's energy revolution, has given U.S. businesses a critical leg up in today's intensely competitive global economy. High energy prices weigh more heavily on energy intensive industries such as chemicals, manufacturing, and steel. Figures 7, 8, and 9 show comparative price data for 2016 (in nominal U.S. dollars) from the International Energy Agency (IEA).⁴ They clearly show that American industry pays two to four times less for natural gas, coal, and electricity than many of its global competitors, a difference that is helping to drive a U.S. manufacturing revival. Lower American energy costs are forcing many trade-exposed companies in these sectors to shift production to the United States.

Shale energy has brought tremendous economic benefits to communities across the United States. Research by IHS indicates that every state is benefitting, regardless of whether shale development is happening in their region. IHS found that by 2020 almost \$113 billion in revenue will be created (in constant 2012\$) and that 2.9 million direct and indirect jobs will result from the economic activity associated with unconventional oil and gas development (shale).⁵

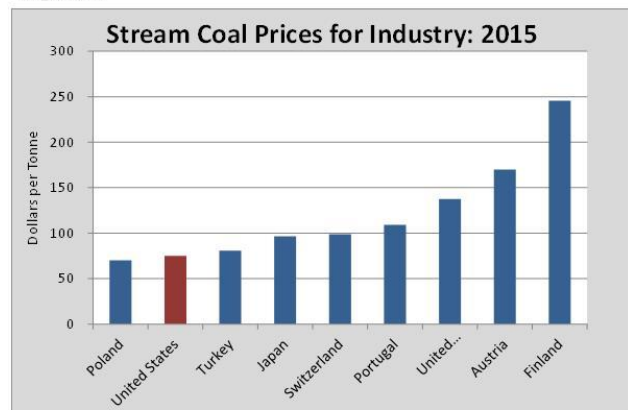
A follow up to the IHS study of the downstream impacts also concludes that lower prices for energy and chemical

Figure 7.



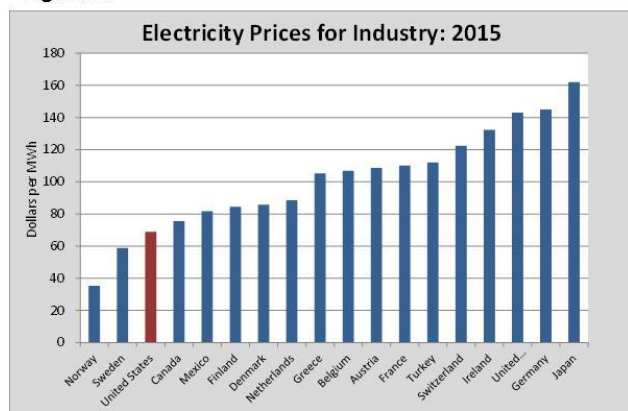
Source: International Energy Agency

Figure 8.



Source: International Energy Agency

Figure 9.



Source: International Energy Agency

⁴ IEA. 2017. *Key World Energy Statistics 2017*. Available at: <http://www.iea.org/publications/freepublications/publication/KeyWorld2017.pdf>.

⁵ IHS. 2012. *America's New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy*. Volume 2 —State Economic Contributions. Available at:

https://www.globalenergyinstitute.org/sites/default/files/Americas_New_Energy_Future_State_Highlights_Dec2012.pdf.

feedstocks brings great competitive advantages to American manufacturing.⁶ The IHS CERA research projects that, between 2012 and 2025, nearly \$346 billion (in constant 2012\$) will be invested across midstream and downstream energy and energy-related chemicals value chains. Roughly \$100 billion of that will be directed toward manufacturing and construction of over 47,000 miles of new or modified pipeline infrastructure. Major investments related to shale oil and natural gas production are already taking place within the chemical-related industries, with cumulative investments expected to grow to more than \$129 billion by 2025. These investments are taking place in the new chemical, plastics, and related manufacturing facilities across the U.S. According to the IHS CERA:

The unconventional revolution is also contributing to a shift in global competitiveness for the United States by unlocking new production cost advantages for US industries benefitting from lower prices for raw materials and the energy they use. IHS has leveraged its US Macroeconomic Model to capture the benefits of lower natural gas prices and accompanying lower electricity prices on the general economy. Our analysis demonstrates that this manufacturing renaissance will increase industrial production by 3.5% by the end of this decade and by 3.9% by 2025. Output by the manufacturing sector will increase by \$258 billion in 2020 and \$328 billion in 2025. The US competitive advantage is particularly pronounced in energy-intensive industries, such as energy-related chemicals which in the coming years will be a primary beneficiary of lower prices for energy and feedstock. Industries such as organic chemicals, resins, agricultural chemicals, petroleum refining, metals such as iron and steel, and machinery are among the top-ranked sectors benefitting from this revolution. These sectors are expected to benefit from lower energy prices (for those that use oil and natural gas as feedstocks), lower electricity prices, and increased demand for their products as growth in overall GDP spurs domestic consumption.

- **CONSUMER BENEFITS:** But it is not only industry that benefits, consumers do, too. The dramatic increase in development and supply of North American energy resources has also been beneficial to American consumers by putting downward pressure on prices. The chart in Figure 10 illustrates the steep decline in the consumer price index for energy from a range of about 200 to 225 to just about 150, on par with the consumer price indexes for shelter and for food and beverages. As a result, energy expenditures per household have declined from roughly 8% to about 6%, a welcome relief to consumers on pinched budgets.

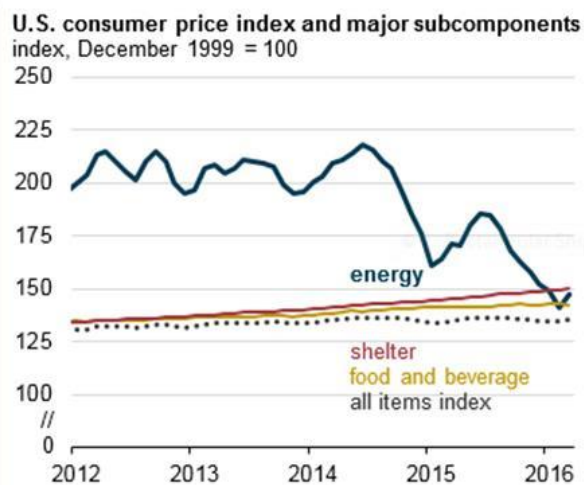
Declining energy prices lower the cost of living for Americans. Since June 2014, decreases in crude oil and natural gas prices have reduced household energy costs, according to EIA and the Bureau of Labor Statistics. In constant 2015 dollars, average annual household energy expenditures peaked at about \$5,300 in 2008. Between 2008 and 2014, average annual

⁶ IHS. 2013. *America's New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy*. Volume 3 — A Manufacturing Renaissance. Available at: https://www.globalenergyinstitute.org/sites/default/files/file-tool/Americas_New_Energy_Future_Exec_Sum.pdf.

household energy expenditures declined by 14.1%. During this period, household expenditures decreased by 17.7% for gasoline, 25.1% for natural gas, and 28.3% for fuel oil.

EIA found that lower gasoline prices have contributed to decreasing household gasoline expenditures since 2012, even though gasoline consumption has generally increased.⁷ EIA estimates that gasoline prices will average \$2.48 per gallon in 2017, which is 33% lower than the price in 2012. Household spending for gasoline is expected to remain below \$2,000 in 2017, which is 2.5% of household income. The recent peak in household gasoline expenditures was \$2,715 or 4% of household income in 2008. U.S. gasoline prices in 2016 were the lowest since 2004.

Figure 10.



Source: Energy Information Administration

As mentioned above, North America’s integrated energy infrastructure network also benefits American consumers by improving flexibility and reliability for the energy supply and distribution system. This is particularly beneficial for consumers when major supply disruptions occur.

NORTH AMERICAN ENERGY AND NAFTA

The growth of the United States’ and North America’s influence on the global energy marketplace is monumental, and provides great benefits to the economic and energy security of our nation and region. This growth is reliant on policies that promote cooperation amongst the North American nations. As recent trends in energy trade among the United States, Canada, and Mexico clearly demonstrate, the United States energy economy has nothing to fear from the North American Free Trade Agreement (NAFTA)—and a lot to gain.

A modernized NAFTA could help solidify the recent advances and create advantages for North American industry, advancing market-based integration of the energy sector, including hydrocarbons production, transportation and processing, as well as electricity generation, transmission, and distribution.

The agreement should guarantee that trade in hydrocarbons, including natural gas, crude oil, and refined oil products, will be uninhibited between the partners by quantitative measures or tariffs affecting either imports or exports. NAFTA partners should also agree to

⁷ EIA. 2017. *Today in Energy*. U.S. household spending for gasoline is expected to remain below \$2,000 in 2017. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=33232>.

facilitate the development of safe cross-border interconnections for electricity and hydrocarbons. A modernized NAFTA should also prohibit local content rules and support common standards and regulations governing the energy sector based on best available practices.

The flip side of modernization, however, is the threat of withdrawing from NAFTA, which is apparently under consideration as a negotiating tactic. A breakdown in the agreement could also occur if the U.S. Trade Representative proceeds with a series of damaging NAFTA proposals strongly opposed by the U.S. business and agriculture community, congressional trade leaders, and the Canadian and Mexican governments.

The Chamber is concerned that withdrawing from NAFTA would impose unacceptably high costs on the United States. Indeed, at a time when we are engaged in tax and regulatory reform to push and maintain the U.S. economic growth rate above 3%, pulling out of NAFTA would undo most of the good these policies are expected to accomplish. It would mean restoring the steep tariffs and other barriers that shut U.S. exports out of Canada and Mexico prior to NAFTA and would lead directly to lost export sales and lost American jobs—1.2 million by one credible estimate.⁸ The states that would be hit hardest include Michigan, Wisconsin, and Pennsylvania and other states in our agricultural heartland.⁹

Even without withdrawal, some proposals would undermine the agreement's benefits. In the energy sector, the Chamber is worried about attempts to undermine the Investor-State Dispute Settlement (ISDS) protections in NAFTA, which we believe are indispensable to maintaining our growing energy sector. For decades, U.S. trade and investment provide for neutral arbitration to resolve investment disputes. These ISDS procedures ensure that other countries treat U.S. investors fairly. ISDS upholds the same fundamental due process and private property guarantees protected by our Constitution, and it obligates other countries to uphold these precepts as well. Attempts to eliminate or weaken ISDS will harm American business and workers and, as a consequence, will undermine business community support for the NAFTA modernization negotiations. It is also worth pointing out that the United States has never lost an ISDS dispute.

The robust energy trade among the United States, Canada, and Mexico that exists under NAFTA inevitably would be a casualty of withdrawal, threatening the "Energy Dominance" that is the core of the Trump Administration's energy policy. This is just one example of the high-level stakes in these negotiations.

Given all of this, it is our strongest recommendation that if NAFTA modernization cannot be reached, the administration must retain its commitment to the current trade agreement.

⁸ ImpactECON. 2017. *Reversing NAFTA: A Supply Chain Perspective*. Available at: <https://impactecon.com/wp-content/uploads/2017/02/NAFTA-Festschrift-Paper-1.pdf>.

⁹ John Murphey. 2017. "Which States Would Be Hit Hardest by Withdrawing from NAFTA?" U.S. Chamber of Commerce. Available at: <https://www.uschamber.com/above-the-fold/which-states-would-be-hit-hardest-withdrawing-nafta>.



Karen Alderman Harbert

President & Chief Executive Officer

Karen Alderman Harbert is president and chief executive officer of the U.S. Chamber of Commerce's Global Energy Institute. Harbert leads the Institute's efforts to build support for meaningful energy action nationally and internationally through policy development, education, and advocacy.

Under Harbert's leadership, the Global Energy Institute—previously known as the Institute for 21st Century Energy-- has evolved into a premier national and international organization dedicated to advancing a constructive energy agenda with the business community, policymakers, and consumers. The Institute celebrated its 10th anniversary in 2017 and has an ambitious program for the next decade.

The Institute has attracted grassroots advocates across the nation supporting its efforts to capitalize on America's tremendous energy promise. The Institute also regularly contributes policy analysis and research, including the groundbreaking Index of Energy Security Risk and the International Index of Energy Security Risk, the first tools to quantify America's energy security on an annual basis, as well as the comprehensive Energy Works for US platform, which provided policy recommendations to secure our nation's energy future.

Harbert frequently testifies in front of Congress and provides analysis to the media, policymakers, and industry leaders. She is an appointed member of the National Petroleum Council, an industry advisory organization that advises the Secretary of Energy on issues related to the oil and gas industries.

Harbert is the former assistant secretary for policy and international affairs at the U.S. Department of Energy (DOE). She was the primary policy adviser to the secretary of energy and to the department on domestic and international energy issues. She negotiated and managed bilateral and multilateral agreements with other countries and also served as vice chairman of the International Energy Agency, which advises its 28 member nations on energy policy issues and orchestrates international responses to energy supply disruptions.

Prior to joining the DOE, Harbert was deputy assistant administrator for Latin America and the Caribbean at the U.S. Agency for International Development (USAID). She had oversight of programs in 11 countries, totaling more than \$800 million and 1,000 employees. In the private sector, Harbert worked for a developer of international infrastructure and power projects valued at more than \$9 billion in countries in the Middle East, Asia, and Latin America.

Harbert gained experience on issues associated with economic reform and privatization through earlier positions at the USAID, the Organization of American States, and the International Republican Institute. She received a degree in international policy studies and political science from Rice University in Houston, Texas.

Harbert resides in Washington, D.C., with her husband and two children.

See more at: <https://www.globalenergyinstitute.org/karen-alderman-harbert>

The mission of the U.S. Chamber of Commerce's Global Energy Institute is to unify policymakers, regulators, business leaders, and the American public behind a common sense energy strategy to help keep America secure, prosperous, and clean. Through policy development, education, and advocacy, the Institute is building support for meaningful action at the local, state, national, and international levels.

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