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ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

September 16, 2015

To: Committee on Energy and Commerce Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Full Committee Markup of H.R.__, the "North American Energy Security and Infrastructure Act of 2015," and H.R. 702, a bill to "adapt to changing crude oil market conditions"

On Wednesday, September 16, 2015, at 5:00 p.m. in room 2123 of the Rayburn House Office Building, the full committee will convene a markup of H.R. __, the "North American Energy Security and Infrastructure Act of 2015," and H.R. 702, a bill to "adapt to changing crude oil market conditions" for the purpose of delivering opening statements. The committee will then reconvene on Thursday, September 17th, at 10:00 a.m. in 2123 Rayburn House Office Building, to complete consideration of the two bills.

I. H.R. __, THE "NORTH AMERICAN ENERGY SECURITY AND INFRASTRUCTURE ACT OF 2015"

Throughout the 114th Congress, the Subcommittee on Energy and Power has held numerous hearings on legislative proposals related to the majority's "Architecture of Abundance." The draft bill being marked up by the full committee is similar to text approved by the Subcommittee on Energy and Power on July 22, 2015, and represents a subset of those proposals that have bipartisan support. This memo contains a section-by-section summary and analysis of the provisions in the draft bill.[1] Additional bipartisan provisions are expected to be added by a managers' amendment, and will be summarized in a subsequent memo.

[1] For additional background information regarding all the provisions from the various discussion drafts, please see the democratic memos from the corresponding hearings: Title II: 21st Century Workforce; Hydropower Regulatory Modernization and FERC Process Coordination; Energy Reliability and Security; Energy Diplomacy; and Title IV: Accountability.

A. Section 1101: FERC Process Coordination

This section is intended to reform the siting review process for natural gas pipelines at the Federal Energy Regulatory Commission (FERC). The previous version of this section directed FERC to select which agencies are to participate in the review process, and establish deadlines for them in completing their consideration of pipeline applications.

Changes made by the Committee include:

- Directing FERC to notify, rather than formally invite, any agency that may consider an aspect of a natural gas pipeline application;
- Directing FERC to make recommendations on the appropriate scope of environmental review;
- Removing the provision related to issue resolution meetings; and
- Removing the provision allowing applicants to provide additional funding to aid FERC in the review of permit applications.

B. Section 1102: Resolving Environmental and Grid Reliability Conflicts

Section 1102 contains text identical to H.R. 1558, the "Resolving Environmental and Grid Reliability Conflicts Act of 2015," which was introduced on March 24, 2015, by Representatives Olson, Green and Doyle. The House passed, by voice vote an identical version of this legislation on May 22, 2013.[2]

Section 1102 amends section 202(c) of the Federal Power Act (FPA)[3] to direct the Department of Energy (DOE), in issuing an emergency order that may result in a conflict with a requirement of any federal, state, or local environmental law or regulation, to ensure that the order limits the generation, delivery, or transmission of electricity to only those hours necessary to meet the emergency and serve the public interest. DOE also must ensure the order, to the maximum extent practicable, is consistent with any applicable federal, state, or local laws or regulations and minimizes any adverse environmental impacts that may result from such order.

[2] U.S. House of Representatives, Voice Vote on Agreeing to H.R. 271 (May 22, 2013); H.R. 271, the "Resolving Environmental and Grid Reliability Conflicts Act of 2013," 113th Cong. (2013).

[3] Section 202(c) of the Federal Power Act provides the Secretary of Energy with the authority to require the generation, transmission, or delivery of electricity, or the temporary connection of facilities when there is a war or other emergency situation that creates a sudden increase in the demand for electricity, a shortage of electricity or facilities for the generation or transmission of electricity, or a shortage of fuel or water for generating facilities. This emergency order authority has only been used on six occasions, only two of which involved ordering generation facilities to run.

C. Section 1103: Emergency Preparedness For Energy Supply Disruptions

Section 1103 authorizes the Secretary of Energy to develop and implement procedures to enhance emergency preparedness for natural disasters. In doing so, DOE is directed to collaborate with state and local governments, as well as the private sector. Actions to enhance emergency preparedness include improving lines of communication and cooperation during emergencies, facilitating engagement in developing state and local energy assurance plans, and establishing education and training programs for emergency response positions.

D. Section 1104: Critical Energy Infrastructure Security

Section 1104 amends the Federal Power Act (FPA) to add a new section 215A, granting new federal authorities intended to protect grid reliability or defense critical electric infrastructure, against grid security emergencies.

This section is similar to a bipartisan bill that the committee considered and the House of Representatives passed in the 111th Congress.[4] While the proposal provides some improvement over current law, it lacks a number of provisions that could undermine its effectiveness in ensuring grid security. For instance, acts or events that were previously considered to be threats or vulnerabilities, and thus covered by the regulatory authorities in the legislation, could no longer be addressed under the provisions of section 1104. Under this section, acts or events must pose an imminent danger to the grid in order to be considered, setting a much higher bar for regulatory action. Accordingly and importantly, neither DOE nor FERC would have additional authority to address vulnerabilities or threats to the grid besides emergencies.

This section does include provisions to reflect DOE's role in ensuring and protecting grid security, and allows FERC to address grid events that have actually occurred.

E. Section 1105: Strategic Transformer Reserve

Section 1105 requires the Secretary of Energy, in consultation with the Electric Reliability Organization, to prepare and submit to Congress a plan to establish a Strategic Transformer Reserve (STR). Under the STR plan, a sufficient number of spare large power transformers (LPTs) are to be stored at strategically located facilities to temporarily replace critically damaged LPTs and restore megawatt capacity in cases of physical attack, cyber-attack, electromagnetic pulse attack, geomagnetic disturbances, severe weather, or seismic events. The STR would be established six months after DOE's plan is submitted to Congress.

F. Section 1106: Cyber Sense

Section 1106 requires the Secretary of Energy to establish, in consultation with FERC

[4] U.S. House of Representatives, Voice Vote on Agreeing to H.R. 5026 (Jun. 9, 2010). The "Grid Reliability and Infrastructure Defense (GRID) Act," was originally introduced by Reps. Markey and Upton.

and the National Institute of Standards and Technology (NIST), a voluntary Cyber Sense program to identify and promote cyber-secure products and technologies intended for use in the bulk-power system. The Cyber Sense certification process must identify and list cyber-secure products and technologies intended for use on the grid, including products relating to industrial control systems, such as supervisory control and data acquisition systems.

G. Section 1107: State Consideration of Resiliency and Advanced Energy Analytics Technologies and Baseload Generation

Section 1107 amends section 111 of the Public Utility Regulatory Policies Act (PURPA), which generally directs states to consider and make a determination whether or not to adopt certain federal standards.

Section 1107 establishes a new federal standard requiring each electric utility to develop plans for increased use of resiliency-related technologies and other approaches that would improve resilience and maintain the flow of power to facilities critical to public health, safety, and welfare. These plans should use "the most current data, metric, and frameworks related to current and future threats, including physical and cyber attacks, electromagnetic pulse attacks, geomagnetic disturbances, seismic events, and severe weather and other environmental stressors." Also, "all types of distributed" generation has been added to the list of resiliency-related technologies. Each electric utility would be required to commence such consideration within one year of enactment and to complete the consideration within two years. Additionally, state regulatory authorities are directed to consider allowing rate recovery for procurement and deployment of resiliency-related technologies.

Section 1107 also establishes a second federal standard requiring each electric utility to develop and implement a plan for deployment of advanced energy analytics technology. State regulatory authorities are directed to consider allowing rate recovery for the procurement, deployment, or the use of advanced energy analytics technology. Electric utilities shall commence such consideration within six months of enactment and complete the consideration within one year.

Under a third federal standard included in section 1107, electric utilities are directed to consider adoption or modification of policies to assure reliable generation in integrated resources plans of utilities. Operational characteristics of "reliable generation" include: "possession of adequate fuel onsite, the operational ability to generate electric energy from more than one fuel source or fuel certainty that ensures adequate fuel supply." Electric utilities shall commence consideration within one year of enactment and complete consideration within two years.

H. Section 2101: 21st Century Workforce

The 21st Century Workforce directs the Secretary of Energy to establish a new program collaborating with schools, industry, unions, national labs, and workforce investment organizations to improve the education and training of women, minority, and veterans for energy and manufacturing-related jobs.

I. Section 3101: Energy Diplomacy, Sense of Congress

Section 3101 contains findings regarding America's "energy abundance" and the desirability of promoting "greater stability and affordability of energy supplies for its allies and trading partners through a more integrated, secure and competitive North American energy system."

J. Section 3102: Energy Security Valuation

Section 3102 directs the Secretary of Energy, in consultation with the Secretary of State, to develop a report on a new valuation of energy security, taking into account a number of recommendations outlined in the Quadrennial Energy Review.

K. Section 3103: North American Energy Security Plan

Section 3103 directs the Secretary of Energy , in consultation with the Secretary of State, to develop and send to Congress a plan to "improve planning and coordination with Canada and Mexico to enhance energy integration, strengthen North American energy security, and promote efficiencies in the exploration, production storage, supply marketing, pricing, and regulation of North American energy resources." This section also requires the plan to include consideration of improvements to U.S. collaboration with Caribbean and Central American partners.

L. Section 3104: Collective Energy Security

Section 3104 directs the Secretary of Energy and the Secretary of state to "collaborate to strengthen domestic energy security and the energy security of the allies and trading partners of the United States." This section also requires DOE and the Department of State to convene two international energy forums to promote U.S. energy security and that of its allies.

M. Section 3105: SPR Mission Readiness Plan

Section 3105 requires the Secretary of Energy, within 180 days of enactment, to conduct a strategic review of the strategic petroleum reserve (SPR), including identification of near and long-term roles for the SPR. Among other things, the Secretary is also required to develop and submit a plan to "achieve the optimal": 1) capacity, location and composition of petroleum products in the SPR; and, 2) storage and distributional capabilities of the SPR. This section also requires the plan to estimate the (financial) resources necessary for the SPR's "long-term sustainability and operational effectiveness."

N. Section 4111-4112: Energy Efficient and Energy Saving Information Technologies, and Energy Efficient Data Centers

Sections 4111 and 4112 contain the provisions of H.R. 1268, the "Energy Efficient Technology Act," sponsored by Rep. Eshoo. The language amends the Energy Independence

and Security Act of 2007 (EISA) to require federal agencies to coordinate with the Office of Management and Budget (OMB), DOE and the Environmental Protection Agency (EPA) in the development of an implementation strategy for the maintenance, purchase, and use of energy-efficient and energy-saving information technologies. The provision also sets out specific items for consideration in developing an implementation strategy and requires the establishment of performance goals for evaluating the agencies' efforts.

Section 4112 also would amend EISA to require DOE and EPA to collaborate with stakeholders in the implementation of the data center energy efficiency program and other measures to improve data center energy efficiency. Among other things, the provision requires DOE to update a 2007 report to Congress on server and data center efficiency, as well as maintain a program to certify specialists in evaluating energy usage and efficiency opportunities in data centers. The section also addresses public availability of federal data center energy usage and efforts to harmonize global standards and metrics for data center efficiency.

O. Section 4113: Report on Energy and Water Savings Potential from Thermal Insulation

Section 4113 contains the provisions of H.R. 568, the "Thermal Insulation Efficiency Improvement Act," introduced by Reps. Kinzinger and McNerney. The provision requires the Secretary of Energy to report within one year on the impact of thermal insulation on both energy and water use systems for potable hot and chilled water in federal buildings and on the return on investment of installing the insulation.

P. Section 4114: Federal Purchase Requirement

Section 4114 includes multiple changes to the definition of "renewable energy" within the federal renewable energy purchase requirements established in section 203 of EPACT 2005. The first change expands the definition beyond electric energy to allow certain "thermal energy" projects to qualify as renewable energy that can be purchased to meet the federal renewable purchase requirements. Further, the language adds the term "qualified waste heat resource" to the definition of renewable energy and defines the term to include exhaust heat, gas that would otherwise be flared, incinerated or vented, and "a pressure drop in any gas for industrial or commercial process." The provision also narrows the definition of municipal solid waste eligible for satisfying renewable purchase requirements by excluding segregated recyclable paper. This section also alters the definition of recyclable paper to be excluded from energy generated using municipal solid waste as a fuel.

Q. Section 4121: Inclusion of Smart Grid Capability on Energy Guide labels

Section 4121 contains provisions of section 4 of H.R. 2685, the "Smart Grid Advancement Act of 2013," sponsored by Rep. McNerney in the 113th Congress. This section would facilitate the development of labels to inform consumers of the capabilities and limitations of products for "smart grid" use.

R. Section 4122: Voluntary Verification Programs for Air Conditioning, Furnace, Boiler, Heat Pump, and Water Heater Products

Section 4122 directs DOE to start a negotiated rulemaking process to establish standards for the testing and verification of products, and directs the Secretary to recognize voluntary verification programs.

S. Section 4123: Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces

Section 4123 reflects a compromise reached by numerous stakeholders, including: furnace manufacturers, natural gas utilities, home builders, energy efficiency, environmental, and consumer advocates. Section 4123 requires DOE to publish a supplemental notice of proposed rulemaking no later than October 31, 2015, which would provide an opportunity for comment by stakeholders. Then, "[I]nterested persons that are fairly representative of relevant points of view" would be expected to submit joint comments to DOE with recommended standards for non-weatherized gas furnaces and mobile home gas furnaces no later than January 1, 2016. DOE would subsequently publish a final rule on July 31, 2015, which would apply to products manufactured on or after any dates jointly recommended.

T. Section 4124: Future of Industry Program.

Section 4124 establishes the Future of Industry Program. This section would reform and reorient DOE's existing industrial research and assessment centers (IACs), a higher education-based partnership that allows university teams around the country to partner with manufacturers to identify opportunities to improve productivity, reduce waste, and save energy. This section would improve IAC coordination and partnership with the Manufacturing Extension Partnership Centers of the National Institute of Standards and Technology, the DOE Building Technologies Program, and the DOE national laboratories, as well as with energy service providers. This section would also help improve outreach to small- and medium-sized manufacturers and technology providers, and directs the Small Business Administration to expedite consideration of applications from eligible small businesses to implement recommendations of the IACs.

U. Section 4131: Use of Energy and Water Efficiency Measures in Federal Buildings

Section 4131, contains the provisions of H.R. 1629, the "Energy Savings Through Public-Private Partnerships Act," sponsored by Reps. Kinzinger and Welch. This section makes several clarifying improvements to the implementations of Energy Savings Performance Contracts (ESPCs). ESPCs allow the federal government to contract for energy-saving and water-saving improvements in federal buildings that are paid for with the resulting energy and water savings over the life of the contract.

V. Section 4141: Coordination of Energy Retrofitting Assistance for Schools

Section 4141 contains the provisions of H.R. 756, the "Streamlining Energy Efficiency for Schools Act" sponsored by Reps. Cartwright and Welch, which passed the House in the 113th Congress.[5] This section directs DOE to establish a clearinghouse to disseminate information regarding available programs and financing mechanisms that may be used to help initiate, develop, and finance energy efficiency, distributed generation, and energy retrofitting projects for schools. The language requires DOE to consult with appropriate agencies to develop a list of programs and financing mechanisms that are, or may be, used for the projects. It also requires the DOE to coordinate with appropriate agencies to develop a collaborative education and outreach effort to streamline communications and promote the programs and financing mechanisms.

W. Section 4211: FERC Office of Compliance Assistance and Public Participation

Section 4211 replaces an existing FPA authorization for an Office of Public Participation that has never been funded, with new language creating an "Office of Compliance Assistance and Public Participation."

The most important concerns raised by Democrats about the initial draft have been addressed in the Committee Print. First, the provision no longer requires the Director to be "selected by, and report solely to, the Commission," which would have given the position a unique and difficult status within the Commission. Second, the Committee Print drops language dictating the office's staffing level and source, which would have taxed the ability of FERC to perform more essential regulatory functions. Finally, the provision drops the requirement for "real-time" compliance guidance, a nearly impossible task given the scope and complexity of most regulatory proceedings. The included provision requires the Director to engage in a number of activities to "promote improved compliance" with Commission rules and orders." These activities include making recommendations regarding consumer protection, market integrity and consistent application of rules and orders; providing regulated entities compliance guidance; and informing the Commission and Congress with respect to energy policy matters in FERC's jurisdiction.

X. Section 4221: GAO Study on Wholesale Electricity Markets

Section 4221 directs GAO to conduct a study of the current market rules, practices and structures of each FERC-approved regional transmission entity to evaluate if and how such market rules, practices and structures meet specific criteria.

[5] U.S. House of Representatives, Voice Vote on Agreeing to H.R. 4092 (June 23, 2014); H.R. 4092, the "Streamlining Energy Efficiency for Schools Act of 2014," 113th Cong. (2014).

II. H.R. 702, A BILL "TO ADAPT TO CHANGING CRUDE OIL MARKET CONDITIONS"

Representative Barton (R-TX) introduced H.R. 702, a bill "to adapt to changing crude oil market conditions" on February 4, 2015, in light of the growing interest in lifting the current prohibition on the export of crude oil from the U.S., due to growing domestic supply and declining prices for producers. On September 10, 2015, the Subcommittee on Energy and Power held a markup on H.R. 702, and forwarded the bill by a voice vote. For further background information on the bill and issues related to easing restrictions on crude oil exports, please see the previous markup memo.

On September 15, 2015, the White House Press Secretary replied to a question on the Obama Administration's receptivity to crude oil exports: "this is a policy decision made over at the Commerce Department, and for that reason we wouldn't support legislation like the one that has been put forward by Republicans."[6]

A. Summary

H.R. 702 lifts the ban on crude exports by repealing the Presidential authority to restrict exports of coal, petroleum products, natural gas, or petrochemical feedstocks under section 103 of Energy Policy and Conservation Act of 1975 (EPCA).[7] Section 3 of the bill also establishes a national policy on oil export restriction, preventing any official of the federal government from imposing or enforcing any restriction on the export of crude oil.[8]

Finally, section 4 requires the Secretary of Energy to conduct a study and develop recommendations on the "appropriate size, composition, and purpose of the Strategic Petroleum Reserve." The study and its accompanying recommendations would be due to the House Committee on Energy and Commerce and Senate Committee on Energy and Natural Resources within 120 days of enactment.[9]

B. Issues Raised by the Bill

The boom in domestic crude oil production and anticipation of continued growth has led to increased calls to lift the limitations on crude oil exports. As described in a recent analysis by the Center for American Progress, "the economic, national security, and environmental impacts of changing long-standing U.S. crude oil policy are neither well-documented nor well-understood."[10] A number of Democratic Members have said a repeal of

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[6] *Vote Near to Repeal Ban on Oil Exports, House Leader Says*, New York Times (Sept. 15, 2015).

[7] H.R. 702, a bill to adapt to changing crude oil market conditions § 2; Pub. L. No. 94-163 (1975).

[8] H.R. 702 § 3.

[9] *Id.* at § 4.

[10] Center for American Progress, *The Environmental Impacts of Exporting More American*

the export ban should be considered in the context of a greater reform of our oil policies and cautioned against a rush to legislatively repeal the ban absent other policy changes.

1. Economic Impacts

The economic impact of lifting the crude export ban is an area of considerable uncertainty and disagreement.[11] Proponents of lifting the current export restrictions, including major oil producers, have argued that significant increases in production for purposes of export would result in lower oil and gasoline prices.[12] But according to a recent study by the U.S. Energy Information Administration (EIA), the anticipated price of oil and gasoline would be virtually unchanged by an easing of export restrictions: "[w]hile removing restrictions on U.S. crude oil exports either leaves global prices unchanged or lowers them modestly, global price drivers unrelated to U.S. crude oil export policy will affect growth in U.S. crude oil production and exports of crude oil and products whether or not current export restrictions are removed."[13]

Another argument commonly used in favor of lifting export restrictions is that an oversupply of light crude in the U.S. has emerged due to a mismatch between the light sweet oil being produced and configurations of the U.S. refining capacity, much of which is optimized to run heavy sour crude. Opponents of lifting crude export restrictions, including many independent refiners, have challenged this premise of U.S. market and refining system oversaturation. During the March 3, 2015 hearing, a representative of the domestic refining industry noted that "U.S. refiners have plenty of room to accommodate new, domestic supplies of light crude oil, with additional capacity to further grow U.S. production. The refining industry is constantly shifting crude slates to maximize efficiency and to meet consumer demand."[14]

Crude Oil (Aug. 21, 2015) (online at www.americanprogress.org/issues/green/news/2015/08/21/119756/the-environmental-impacts-of-exporting-more-american-crude-oil/).

[11] U.S. Energy Information Administration, *What Drives U.S. Gasoline Prices?* (Oct. 30, 2014) (online at www.eia.gov/analysis/studies/gasoline/pdf/gasolinepricestudy.pdf).

[12] According to two commonly cited studies by IHS and ICF International, reductions in oil prices would be anywhere from $0.25 to $5 per barrel (Brent prices), and lower gasoline prices would range from $0.014 to $0.12 per gallon. *See* IHS, *U.S. Crude Oil Export Decision: Assessing the Impact of the Export Ban and Free Trade on the U.S. Economy* (May 29, 2014); ICF International, for the American Petroleum Institute, *The Impacts of U.S. Crude Oil Exports on Domestic Crude Production, GDP, Employment, Trade, and Consumer Costs* (Mar. 31, 2014).

[13] U.S. Energy Information Administration, *Effects of Removing Restrictions on U.S. Crude Oil Exports*, at x (Sept. 2, 2015) (online at www.eia.gov/analysis/requests/crude-exports/pdf/fullreport.pdf). *See* CBO, *Energy Security in the United States* (May 9, 2012) (online at www.cbo.gov/sites/default/files/05-09-EnergySecurity.pdf).

[14] House Committee on Energy and commerce, Subcommittee on Energy and Power, Testimony of Charles Drevna, President of the American Fuel & Petrochemical

The primary beneficiary of a shift in crude export policy would likely be domestic oil producers. EIA notes that the easing of crude export restrictions would likely result in a $29.7 billion increase in gross revenue for oil producers in 2025.[15] Further, "allowing more crude oil exports could result in $8.7 billion less investment in U.S. refining capacity over the next 10 years."[16] CBO estimates that if the restrictions on crude oil exports are lifted, "the prices of domestic light crude oils seen by some U.S. crude oil producers and petroleum refiners would rise."[17] These price increases would be seen primarily by refineries already configured for processing light sweet crude, like those on the east coast.[18]

2. Climate and Environmental Impacts

Maximizing U.S. oil production would exacerbate climate change and increase the risks to the land, water and air. According to a recent study, approximately one third of the world's remaining oil reserves and half of the remaining gas reserves should remain untouched over the next 40 years in order to prevent the global average temperature from rising more than 2°C.[19] An increase in oil production, consistent with unrestricted crude exports, would run counter to U.S. and global efforts to limit greenhouse gas emissions and prevent catastrophic climate change.

Further, the drilling boom has outpaced the building of infrastructure necessary to control methane leaks from oil and gas wells leading to increased emissions of this potent greenhouse gas. The energy sector—including sources like natural gas and petroleum

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Manufacturers, *Hearing on 21st Century Energy Markets: How the Changing Dynamics of World Energy Markets Impact our Economy and Energy Security,* 114th Cong. (Mar. 3, 2015).

[15] U.S. Energy Information Administration, *Effects of Removing Restrictions on U.S. Crude Oil Exports,* at 23 (Sept. 2, 2015) (online at www.eia.gov/analysis/requests/crude-exports/pdf/fullreport.pdf).

[16] Center for American Progress, *The Environmental Impacts of Exporting More American Crude Oil* (Aug. 21, 2015) (online at www.americanprogress.org/issues/green/news/2015/08/21/119756/the-environmental-impacts-of-exporting-more-american-crude-oil/).

[17] Congressional Budget Office, *The Economic and Budgetary Effects of Producing Oil and Natural Gas From Shale* (Dec. 7, 2014) (online at www.cbo.gov/sites/default/files/cbofiles/attachments/49815-Effects_of_Shale_Production.pdf).

[18] U.S. Energy Information Administration, *This Week in Petroleum: Regional refinery trends continue to evolve* (Jan. 7, 2015) (online at www.eia.gov/petroleum/weekly/archive/2015/150107/includes/analysis_print.cfm).

[19] *The geographical distribution of fossil fuels unused when limiting global warming to 2°C,* Nature (Jan. 7, 2015) (online at www.nature.com/nature/journal/v517/n7533/full/nature14016.html).

systems—is the largest source of U.S. methane emissions, accounting for 263.5 million metric tons of CO_2 equivalent in 2013.[20] The lack of infrastructure to capture the co-produced methane, combined with low natural gas prices, often makes it cheaper for industry to burn the gas rather than capture and process it.[21] So an increase in oil production—for purposes of exportation—would likely result in significant increases in uncontrolled greenhouse gas emissions.

3. National Security Impacts

Lifting the ban on crude exports would dramatically alter decades of U.S. policies put in place to encourage energy independence and security. This is particularly concerning in light of section 3 of the bill, which prevents any future restriction on the export of crude oil. As noted above, imports of crude oil still represent over a quarter of the nation's annual oil consumption.[22] Even with continued production and decreased demand, EIA estimates that total imports will only drop to 17% in 2040 with current regulations in place.[23] Lifting the ban on crude exports would hinder the predicted decline in imports and leave the U.S. dependent on foreign countries for more than a quarter of its oil for decades.

Critics of the ban on crude oil exports contend that access to U.S. crude would decrease Europe's reliance on Russian oil and free them from "coercive energy supply policies".[24] This scenario is far from guaranteed. According to CRS, "the decision to export crude oil will be based on commercial and economic considerations, not directed and controlled by the federal government," therefore, "predicting and quantifying physical crude oil flows to a particular region in the world under a non-restricted export scenario is difficult and is subject to several assumptions that may or may not be realized."[25] European refineries

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[20] U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013 (April 2015)* (online at http://epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Chapter-3-Energy.pdf).

[21] *Gas flaring permits surge in Texas*, Fuelfix.com (Apr. 9, 2012) (online at fuelfix.com/blog/2012/04/09/gas-flaring-permits-surge-in-texas/).

[22] U.S. Energy Information Administration, *Monthly Energy Review August 2015* (Aug. 25, 2015) (online at www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf).

[23] U.S. Energy Information Administration, *Annual Energy Outlook 2015*, at ES-4 (Apr. 2015) (online at www.eia.gov/forecasts/aeo/pdf/0383(2015).pdf).

[24] *Senate Oil Export Hearing Panelists Debate National Security And Limited Refinery Capacity*, Breaking Energy (Mar. 30, 2015) (online at breakingenergy.com/2015/03/30/ *Opportunities For U.S. Allies and U.S. National Security*, 114th Cong. (Jun. 23, 2015).

[24] *Id.* senate-oil-export-hearing-panelists-debate-national-security-and-limited-refinery-capacity/).

[25] Congressional Research Service, *Potential Market Effects of Removing Crude Oil Export Restrictions: Eastern Europe* (May 29, 2015).

are currently configured to process Russia's medium sour crude and would need significant time and capital to handle American light sweet crude.[26] East Asian markets are the most likely beneficiaries of American crude oil exports, with China set up to be the top purchaser.[27]

[26] Senate Committee on Foreign Relations, *Hearing on American Energy Exports: Opportunities For U.S. Allies and U.S. National Security*, 114th Cong. (Jun. 23, 2015).

[27] *Id.*