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The 2015 Political Landscape Will Have Far-Reaching Energy Industry Implications

EPA Emissions Rules and Legislative Actions Will Impact Every Aspect of the Energy Value Chain in 2015

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Research Report

Author

Erin Carson
Chief Policy Strategist

Eric Davis
Research Manager

Contact

(212) 537.4797
info@enerknol.com

Key Takeaways:

- Policies impacting energy independence and associated environmental impacts are coming head-to-head at the federal level
- Legislators will aim to settle long-debated oil and gas infrastructure and export bills and will use legislative authorities to delay, defund or vacate Administration regulations
- The Obama Administration has statutory deadlines for critical standards and regulations in the next year, as well as a soft political deadline in 2016 to promulgate major regulations without the threat of Congress voting to vacate the rules
- The outcome of energy policies in the next year will have a dramatic impact on conventional and renewable energy industries, utilities and federal and state government, both in 2015 and beyond

Entities Mentioned:

- Bureau of Land Management
- Department of Energy
- Department of the Interior
- Environmental Protection Agency
- Federal Energy Regulatory Commission

Related Research

[Lawmakers Consider Energy Tax Reform as December Deadline Nears for Extending Expired Provisions](#)

[Energy Efficiency Resource Growth Hinges on State Policies and Financing Mechanisms](#)

[DOE Aims to Streamline LNG Export Application Process](#)

Executive Summary

2015 will be a showdown over President Obama's energy legacy through regulatory change and pushback from the 114th Congress, all while looking ahead at the 2016 elections. The outcome will have a dramatic impact on utilities, conventional and renewable energy industries and federal and state government in 2015 and beyond.

The recent debates over the Keystone XL pipeline – and its amendments – have foreshadowed both the Republican legislative agenda and the Democratic strategies to stop it, as well as possible bipartisan compromise that could lead to a comprehensive energy efficiency bill. Republicans will focus on securing oil and gas in the “all of the above energy strategy,” and Democrats aim to block partisan legislative efforts by putting Republicans on record as either supporting or denying human contribution to climate change.

In addition, as executive agencies begin to roll out plans for proposed and final climate regulations, the Republican-held Congress will employ all its spending and legislative powers to block or delay many of the more than two dozen planned agency regulations that will impact the energy industry. At the end of either extreme, the outcome of this standoff will result in either veto-proof legislation supporting oil and gas infrastructure and exports or a barrage of climate regulations that would stifle conventional energy generation, maybe both. Most likely, lawmakers will settle for a politically responsible middle ground that will focus on energy efficiency and tempered infrastructure measures. Republicans will likely rely on spending and oversight authorities to curb the impact from agency rules and look ahead to maintaining control in 2016.

The following provides a detailed look at the legislative and regulatory agenda in 2015, including the political strategies in Congress and an overview of planned Obama Administration regulations; the potential impacts to industry from this agenda; and actionable next steps.

Political Framework: Achieving an Energy Package in 2015 will Require Middle Ground

The first Republican energy bills in 2015 have addressed the oil and natural gas supply chain, including natural gas transmission and distribution infrastructure, LNG permitting and offshore oil drilling and oil exports. In the first three weeks of the new Congress, lawmakers introduced 30 bills addressing oil and natural gas, most of which were re-introduced versions of previous legislation that passed the House but stalled in the Senate during the 113th Congress. When the first of these bills (the Keystone XL pipeline) was brought to the floor, Democrats responded by attaching provisions designed to record Republicans' official stance on whether human activity has contributed to climate change, an expected platform during the 2016 debates.

Thirty bills addressing oil and gas were introduced in the first three weeks of the new Congress

Beyond energy legislation, an overarching Republican theme in the 114th Congress will be using congressional oversight and spending authorities to monitor and curb how the EPA implements new climate rules and permitting requirements under the Clean Air Act. To achieve this, Republicans will use both standalone legislation and other vehicles, such as regulatory reform bills, spending measures, and committee oversight hearings.

Senate Amendments to Keystone XL Pipeline Bill Foreshadow Republican, Democrat Strategies

The Keystone XL pipeline was the first piece of major legislation considered in 2015, and the inclusion of more than 80 amendments from both parties to S.1, the Keystone XL Pipeline Act, have foreshadowed the coming energy debate. The bill was introduced by Sens. John Hoeven (R-ND) and Joe Manchin (D-WV) on January 6 and is cosponsored by 59 Senators, including six Democrats.

The debate over amendments to the bill have shown that highly partisan issues from either Republicans or Democrats will require compromise, particularly if any bill is to achieve a 67-vote veto-proof majority, or pass the White House.

Republican Agenda Aims to Secure Oil and Gas Infrastructure and Exports

A number of Republican-sponsored amendments to S.1 have included efforts to expand oil and gas infrastructure and exports, as has legislation in line for floor consideration.

Oil and Gas

Proposed Republican amendments to the Keystone bill have included provisions to eliminate the requirements for a presidential permit and greenhouse gas emission analyses in the approval process for cross-border energy infrastructure. For example, Sen. Cruz (R-TX) introduced S.Amdt 16,

the North American Infrastructure Act, a bipartisan bill from the 113th Congress that would eliminate the presidential permit requirement for cross-border oil and natural gas pipelines and electric transmission facilities, among other provisions. Sen. Fischer (R-NE) introduced S.Amdt.19, which would eliminate the need for federal agencies to consider greenhouse gas emissions when completing their environmental impact statements to meet National Environmental Policy Act (NEPA) requirements.

While neither amendment has yet been considered on the Senate floor, the proposals point to upcoming legislation that will establish statutory guidelines for approving pipeline infrastructure. The House Energy and Commerce committee introduced several bills during the previous Congress expected to be re-introduced in the coming months to set timelines and clear processes for pipeline project review and approval. This includes provisions to temper environmental review requirements. On Jan. 6, Rep. Mike Pompeo (R-KS) re-introduced the Natural Gas Pipeline Permitting Reform Act (H.R. 161), which would both establish statutory deadlines for the Federal Energy Regulatory Commission (FERC) and other agencies to approve permits for constructing new interstate natural gas pipelines. While there is political momentum for facilitating cross-border infrastructure, Democrats and the White House will oppose provisions to restrict presidential involvement or dilute NEPA requirements. The requirements will have to be cut or tempered to pass the White House.

H.R. 161 aims to expedite natural gas pipeline approvals

LNG and Oil Exports

In addition to facilitating cross-border energy infrastructure, Republicans aim to expedite natural gas exports and remove the ban on exporting crude oil. To the Keystone bill, Sen. Ted Cruz (R-TX) introduced both S.Amdt.15, which would expedite liquefied natural gas (LNG) export applications to world trade organization member countries; and S.Amdt.14, which would repeal presidential authority to restrict oil exports. S.Amdt.14 could still pass for inclusion in the Keystone package, but Republicans will likely wait on including an amendment over oil exports to avoid any measure that could keep Democrat Senators from an up-vote on Keystone.

Republican Keystone bill amendments target oil and gas initiatives

Either way, bills covering both topics are in the queue for floor consideration. The Senate Energy and Natural Resources Committee is scheduled to hold a hearing on Jan. 29 to examine the LNG Permitting Certainty and Transparency Act (S.33), sponsored by Sens. John Barrasso (R-WY) and Martin Heinrich (D-NM). The bill aims to expedite Department of Energy (DOE) decisions on LNG export applications involving non-Free Trade Agreement (FTA) countries. The legislation would set a 45-day deadline for DOE to approve or deny applications after NEPA review publication and provide LNG export applicants with expedited judicial review if DOE fails to act within the 45-day deadline. On Jan. 6, Rep. Jim Bridenstine (R-OK) re-introduced the Domestic Prosperity and Global Freedom Act (H.R. 89), the House companion bill.

Expediting LNG exports has considerable political momentum. Original co-sponsors to the Senate bill include lawmakers from both parties including

Sens. Cory Gardner (R-CO), Heidi Heitkamp (D-ND), John Hoeven (R-ND), Tim Kaine (D-VA), Shelley Moore Capito (R-WV) and Michael Bennet (D-CO). In addition, points raised by multiple House Energy and Commerce hearings held last year that focused on energy as a diplomatic tool have gained bipartisan traction. Lawmakers on both sides are saying the legislation would allow LNG exporters to capitalize on increased domestic production to become competitive suppliers in the global market, with indirect geopolitical implications for Ukraine and EU consumer countries currently reliant on Russia. The primary LNG bill provisions would likely pass Congress and the White House, if the measure could survive policy riders attached in the Senate. While standalone oil export legislation, such as the Crude Oil Export Act sponsored by Michael McCaul (R-TX), has garnered Republican co-sponsors and will likely pass the House, a bill to repeal the oil export ban will not likely find the same political momentum. A lift on the ban is not anticipated in 2015 but has already been a talking point for 2016 political campaigns, particularly for Republicans like Sen. Cruz, who is expected to announce a run for the Republican ticket.

A crude oil export bill would not pass the Senate with veto-proof majority

Democrat Strategy Targets Climate Change for 2016

On the other side, a central Democrat strategy in handling the Republican Congress in 2015 will be to pin down Republicans from swing states who face reelection in 2016 on stating their view on climate change. They will also attach amendments to bills that will allow political posturing for Democrats. In 2016, Democrats will have to defend only 10 congressional seats, while Republicans will be defending 24, with particularly vulnerable Republicans in seats where President Obama won in 2008 and 2012 – Florida, Illinois, Iowa, New Hampshire, Ohio, Pennsylvania and Wisconsin. The first glimpse of this strategy came during the January 9 Senate Energy and Natural Resources markup hearing. During the markup, Sen. Sanders (I-VT) introduced an amendment that would require Republicans to agree to a "sense of Congress" on climate change: that it is real, is caused by human activity, has caused "devastating problems," and that the U.S. must transform its energy system to address these problems. The amendment was tabled so the bill could pass to the Senate floor. At least ten Democrat amendments have included "messaging provisions" on climate change, including the following:

Democrats push for human-caused climate change acknowledgement

- **S.Amdts.7 and 8, both sponsored by Sen. Brian Schatz (D-HI)** – that fighting climate change requires transitioning away from "dirty energy, such as oil and coal" and that Congress should "take action to reduce greenhouse gas emissions and heat-trapping pollution;"
- **S.Amdts.11 and 12, both sponsored by Sen. Merkely (D-OR)**, that "climate change is real" and "due to human activity;"
- **S.Amdt.24, sponsored by Sen. Sanders (I-VT)**, that "climate change is real" and that "it is imperative that the United States transform its energy system away from fossil fuels and toward energy efficiency and sustainable energy as rapidly as possible."

- **S.Amdt.29, sponsored by Sen. Whitehouse (D-RI)**, that “climate change is real and not a hoax.”
- **S.Amdt.31, sponsored by Sen. Kaine (D-VA)**, that “human activity significantly contributes to climate change.”
- **S.Amdt.58, sponsored by Sen. Schatz (D-HI)**, that “climate change is real and human activity significantly contributes to climate change.”
- **S.Amdt.99, sponsored by Sen. Manchin, (D-WV)**, that “climate change is real, it is caused by human activity, and it is already causing devastating problems.”

In response, Senate Majority Leader Mitch McConnell (R-KY) will attempt to keep these measures from being put on the record. Republican leadership in the Senate has tabled any amendments brought to the floor that explicitly state that climate change is caused by human activity, effectively keeping vulnerable Republicans from being forced to vote on controversial statements. The one climate change amendment that has been brought to a vote and passed was S.Amd.24, sponsored by Sen. Whitehouse, which simply states that “climate change is real, and not a hoax.”

Outcome of Keystone Will Lay Ground for both Partisanship and Compromise

As of Jan. 25, the Senate had voted on 15 amendments, not including nine Democrat amendments tabled without a vote, approving four (Table 1). Rejected measures included Democrat amendments to ensure oil transported through the pipeline was used to reduce U.S. dependence on Middle Eastern oil (failed 57-42) and to require that U.S. materials be used to construct the pipeline (failed 53-46). Sen. McConnell has moved to invoke cloture on the bill, which would end debate and require a final vote.

Table 1 – Passed Amendments to S.1 (Jan. 25, 2015)

Vote	Sponsor	Description
94-5	Portman (R-OH)	To promote energy efficiency.
98-1	Whithouse (D-RI)	To express the sense of the Senate that climate change is real and not a hoax.
64-33	Cornyn (R-TX)	To ensure private property is protected as guaranteed by the United States Constitution.
75-23	Murkowski (R-AK)	To express the sense of the Senate that all forms of unrefined and unprocessed petroleum should be subject to the nominal per-barrel excise tax associated with the Oil Spill Liability Trust Fund.

Source: EnerKnol Data

Bipartisanship over Energy Efficiency

The passed energy efficiency amendment has paved the way for lawmakers on both sides to find a source of bipartisan compromise that will be essential to achieving even part of Republican and Democrat energy agendas. Sen. Rob Portman (R-OH) introduced S.Amdt.3 to the Keystone bill, a modified version of the bipartisan Energy Savings and Industrial Competitiveness Act he co-

sponsored with Sen. Shaheen (D-NH) last year. The amendment, the Energy Efficiency Improvement Act of 2015, would address energy efficiency measures in federal and other buildings. The amendment includes high-performance energy efficiency measures, the voluntary Tenant Star program, grid-enabled heaters and a database for storing publicly available energy-related building information. The amendment passed overwhelmingly by a vote of 94-5. Even if the Keystone bill is vetoed by the President, the vote on the energy efficiency amendment has demonstrated bipartisan support and increased likelihood as a vehicle for a comprehensive energy bill.

Moving forward, the Keystone bill will likely fall short of the veto-proof 67-vote threshold. If the Senate passes the bill below 67 votes, the bill will depend on how President Obama considers the progress made in the State Department's analysis. On January 19, the State Department notified eight federal agencies – Energy, Defense, Transportation, Homeland Security, Justice, the Interior, Commerce and the Environmental Protection Agency – to complete their project assessments by February 2. This is the final step before Secretary of State John Kerry's final review. President Obama previously threatened to veto the bill. Either way, the amendments and the debate indicated next steps for both parties, not least of which was the vote over Portman's energy efficiency bill.

Keystone bill not likely to reach veto-proof level

Republicans will Leverage Spending and Oversight Authorities to Block Administration Regulations

Republicans will focus on regulatory reform, spending legislation, and oversight to block a number of the regulations slated for 2015. According to 2014 Regulatory Agendas published by individual agencies, the administration will propose or finalize over two dozen regulations in the next year that will directly impact energy industries, including energy efficiency and oil and gas industries (Table 2).

Table 2 – Sample of Planned Federal Regulations for 2015 that Impact Energy Industries

Agency	Regulation Title	RIN	Status
DOE - EE	Energy Efficiency Standards for Manufactured Housing	1904-AC11	Proposed Rule
DOE - EE	Energy Conservation Standards for General Service Lamps	1904-AD09	PreRule
DOE - EE	Energy Conservation Standards for Residential Non-weatherized Gas Furnaces	1904-AD20	Proposed Rule
DOI-BLM	Hydraulic Fracturing	1004-AE26	Final Rule
DOI-BLM	Venting and Flaring: Waste Prevention and Use of Produced Oil and Gas for Beneficial Purposes	1004-AE14	Proposed Rule
EPA - WATER	Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category	2040-AF14	Final Rule
EPA - WATER	Water Quality Standards Regulatory Revisions	2040-AF16	Final Rule

Agency	Regulation Title	RIN	Status
EPA-OAR	Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources: Electric Utility Generating Units	2060-AQ91	Final Rule
EPA-SWER	Revisions to the National Oil and Hazardous Substances Pollution Contingency Plan; Subpart J Product Schedule Listing Requirements	2050-AE87	Proposed Rule
EPA-OAR	Renewable Fuel 2015 Volume Standards	2060-AS22	Proposed Rule
EPA - OPPTS	Formaldehyde; Third-Party Certification Framework for the Formaldehyde Standards for Composite Wood Products	2070-AJ44	Final Rule
EPA - SWER	Revising Underground Storage Tank Regulations--Revisions to Existing Requirements and New Requirements for Secondary Containment and Operator Training	2050-AG46	Final Rule
EPA-OAR	Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles--Phase 2	2060-AS16	Proposed Rule
EPA - SWER	Modernization of the Accidental Release Prevention Regulations Under Clean Air Act	2050-AG82	Proposed Rule
EPA - OPPTS	Formaldehyde Emissions Standards for Composite Wood Products	2070-AJ92	Final Rule
EPA-OAR	Review of the National Ambient Air Quality Standards for Lead	2060-AQ44	Proposed Rule
EPA - SWER	Standards for the Management of Coal Combustion Residuals Generated by Commercial Electric Power Producers	2050-AE81	Final Rule
EPA - SWER	User Fee Schedule for Electronic Hazardous Waste Manifest	2050-AG80	Proposed Rule
EPA-OAR	Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements	2060-AR34	Final Rule
EPA-WATER	Definition of "Waters of the United States" Under the Clean Water Act	2040-AF30	Final Rule
EPA-OPPTS	Polychlorinated Biphenyls (PCBs); Reassessment of Use Authorizations	2070-AJ38	Proposed Rule
EPA-OPPTS	Pesticides; Agricultural Worker Protection Standard Revisions	2070-AJ22	Final Rule
EPA-OAR	Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units	2060-AR88	Final Rule
EPA-OAR	Review of the National Ambient Air Quality Standards for Ozone	2060-AP38	Proposed Rule
EPA-OAR	Carbon Pollution Emission Guidelines for Existing Stationary Sources: EGUs in Indian Country and U.S. Territories	2060-AR33	Proposed Rule
EPA-OAR	Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards	2060-AQ75	Final Rule

Source: EnerKnol Data

Republican Legislation Will Reform Rulemaking and Place Spending Limits on Executive Agencies

Republicans will re-introduce a number of measures that aim to require increased transparency and accountability in the rulemaking process as well as use spending authorities to influence upcoming regulations. In early January, the House passed the Regulatory Accountability Act (H.R. 185), which backers say will boost transparency and streamline the rulemaking process by adding a number of new compliance requirements. The bill includes a requirement for

the EPA, DOE and other agencies to determine “the least costly method” for industry to meet new regulations and a requirement for judicial rule of draft rules. The administration issued a veto threat on the bill. Republicans in both chambers have also reintroduced the Regulations from the Executive in Need of Scrutiny (REINS) Act, which would require Congress to approve major rules before they would go into effect.

Other recently introduced measures aim at curbing EPA regulations in particular. For example, S. 66, sponsored by David Vitter (R-LA), would prohibit “any regulation regarding carbon dioxide or other greenhouse gas emissions reduction in the United States until China, India and Russia implement similar reductions.” The bill cites a 1997 Senate Resolution that the United States should not accept any agreement that would mandate new commitments to limit or reduce greenhouse gas emissions by developed countries unless the agreement also mandated new specific scheduled commitments to limit or reduce greenhouse gas emissions by developing countries within the same compliance period, noting that the administration continues to move forward with carbon dioxide emission regulations even while China, India and Russia have not imposed similar regulations. Another bill, S. 156, sponsored by Sen. Bill Cassidy (R-LA), would prohibit the EPA from promulgating final energy-related rules that are estimated to cost more than \$1M and would cause “significant adverse effects to the economy.”

Finally, Republicans will use spending legislation to defund administration programs through standalone bills or as policy riders to appropriations packages. In particular, Republicans will try to defund programs related to the Clean Power Plan and rules to reduce greenhouse gas emissions. For example, Republicans have already introduced legislation in both chambers that would “rescind funds made available to the administrator of the Environmental Protection Agency if the administrator fails to meet certain deadlines.” The Senate bill, S. 110, is sponsored by Sen. Dean Heller (R-NV), and its House companion bill, H.R. 352, is sponsored by Rep. Sean Duffy (R-WI).

S.110 would tie EPA funding to certain deadlines

Congressional Oversight Panels Will Target Legality of Numerous Rules

In addition to legislation, a number of congressional committee chairs have indicated that focusing on EPA, DOI and other administration regulations will be a key committee focus in 2015 (Table 3). These committees are expected to hold multiple oversight hearings in 2015 to receive testimony from senior administration officials on the record. They are also expected to ensure regulatory policies are within the bounds of legislative intent and reflect the public interest.

Table 3 – Congressional Committee Chairs with Stated Emphasis on Oversight of Regulatory Actions

Congressional Committee	Chair	2015 Administration Oversight Actions
House Oversight and Government Reform Committee	Jason Chaffetz (R-UT)	<ul style="list-style-type: none"> Created new Interior subcommittee to oversee Interior, EPA, and the Energy and Agriculture departments Focus on DOI’s new rules on hydraulic fracturing, methane emissions, and royalties

Congressional Committee	Chair	2015 Administration Oversight Actions
		<ul style="list-style-type: none"> • Focus on EPA's relationship with the NRDC, upcoming climate rules • Plans to work with House Appropriations subcommittees that oversee EPA budgets to collaborate on legislation that will oppose "these onerous, unilateral decisions by the Obama Administration."
House Natural Resources Committee	Rob Bishop (R-UT)	<ul style="list-style-type: none"> • Was previously the chairman of the Subcommittee on Public Lands • Overhauled his committee staff and created a new subcommittee on Oversight and Investigations • Stated there is an "increased need for congressional oversight of the Executive Branch's actions and regulations." • Placed the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA) under exclusive jurisdiction of the Full Committee
Senate Environment and Public Works	James Inhofe (R-OK)	<ul style="list-style-type: none"> • Included "aggressive oversight of EPA regulations" as a part of his announced 2015 committee agenda

Source: EPA, BLM, EnerKnol Data

In addition to legislation and oversight hearings, Congress also has the power of the vacatur, but its near-term impact would be in delaying the promulgation of new rules. Under the Congressional Review Act (CRA), Congress can disapprove of and vacate new regulations. The legislation to vacate still requires the President's approval in addition to majority votes in Congress, which means President Obama would be quick to veto. However, a CRA bill can also be used to stall the implementation of new bills, since a bill vetoed by the President can be voted on again by Congress to overturn the veto within 30 days. Congress would need a two-thirds supermajority to overturn the veto. Moving forward, committee hearings and legislation introduced during the next two years could resurface to back a CRA bill under a new administration, particularly if Republicans gain full control of both Congress and the White House in 2016. If a CRA bill passes both chambers and is signed by the President, the rule "has no effect."

Plausible Legislation Would Bolster Oil and Gas, Energy Efficiency Industries

The implementation of planned Republican legislation and Obama Administration regulations will have direct impact on utilities, regional regulators and conventional and renewable energy industries in the next year.

Passage of the Keystone XL bill would ease crude oil transportation constraints to the lower 48 and support various pipeline-crossing state and local economies. The bipartisan-supported LNG infrastructure bill would support both producers and terminal owners through timely access to global markets, while a comprehensive energy efficiency bill would directly impact utilities and bolster energy efficiency companies.

If Approved, Keystone XL Would Ease Canadian Crude Transport Constraints

The Keystone XL pipeline would link with existing pipelines to bring significant crude oil supplies to southern Texas refineries, providing additional state tax revenues. Overall, the states with most to gain from the project are those through which the pipeline and associated southern pipelines would cross: Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas; as well as those in which steel and other construction supplies are produced. Under the proposed legislation, the State Department's Final Supplemental Environmental Impact Statement (SEIS), which was issued in January 2014, would fully satisfy the NEPA requirements and other statutory provisions that require federal agency consultation or review.

State economies would benefit most from approved Keystone XL pipeline

Reducing dependence on foreign oil and creating thousands of domestic jobs are consistent pro-Keystone XL talking points. If approved, the proposed 875-mile Keystone XL pipeline would deliver up to 830,000 barrels per day (bpd) of oil sands extracted in Alberta (Canada) and crude oil from the Bakken shale formation in North Dakota and Montana to Steele City, Nebraska and subsequent delivery to Gulf Coast refineries.

Crude oil prices remain the key driver to Canadian oil sands production. The recent decline in domestic and global oil prices, if sustained, could impact Canadian oil sands production, as prices below \$65-75 per barrel challenge breakeven supply costs of smaller operations. Larger producers, such as Suncor Energy, Syncrude Canada and Cenovus Energy have breakeven levels closer to the \$30-40 range and are better positioned to tolerate the currently low crude oil price environment.

Keystone XL approval would ease crude oil transportation constraints, because much of the Canadian supply is moved by rail and more than three million bpd of existing pipeline capacity. The pipeline would supply refiners such as Valero Refining Co, CITCO Petroleum Corp and Houston Refining LP. This supply could

ease reliance on imports from Venezuela, Mexico and other South American countries. Still, despite the potential domestic heavy crude supply increase with an approved pipeline, the project would have minimal impacts on benchmark (West Texas Intermediate [WTI]) prices. This price is tied more to total domestic and global supply-demand factors, not to Canadian crude oil import capacity.

Terminal Approval and Construction Timelines Hold Back LNG Exports

Legislation to expedite the liquefied nature gas (LNG) export approval process would allow facilities to more rapidly capitalize on favorable export economics. LNG export economics are also impacted by currently low crude oil prices, and companies are eager to finalize facilities to exploit global LNG price disparities. The federal government regulates and restricts the export of natural gas – including LNG – under section 3 of the Natural Gas Act of 1938. This act tasks the Department of Energy (DOE) with review of import and export applications and weighing the value of the public interest in each transaction. In May 2011, the DOE granted its first LNG export approval to Cheniere Energy for their Sabine Pass liquefaction plant to export 2.2 billion cubic feet per day (Bcf/d) to non-free trade agreement (FTA) countries.

In August 2014, DOE revised its LNG export decision procedure and now acts on non-FTA applications only after completion of a FERC-prepared environmental review under the NEPA. Previously, DOE issued conditional authorizations prior to final review and considered non-FTA applications based on order of precedence. Promoting FERC reviews will enable commercially viable projects, which might have been buried in the order of precedence for years, to jump to the head of the line.

The DOE's decision to reform the permit issuance process for LNG export facilities to non-FTA countries will likely have minimal gas price impacts in the short-term. Current LNG exports are dwarfed by pipeline exports of natural gas to Mexico and Canada. In addition, applications to export to FTA countries represent a higher volume of natural gas than those applications that represent the intent to export to non-FTA countries. Many of the applications for permits to export LNG are for 20-30 years and for the maximum value (in Bcf) the facilities anticipate could be exported at some point in that time frame, not necessarily what will be exported as soon as the applications are approved. A simple review of just the "nameplate" capacity of the proposed export facilities may produce an inflated view of the amount of LNG that will be exported.

The opportunity to export LNG may encourage increased production of natural gas and the development of new technologies to exploit the resource. Even if a gap developed between the spot value of LNG cargoes and Henry Hub prices, the large cost associated with shipping LNG would keep substantial sums of natural gas in the U.S. Interveners in LNG export license dockets, such as the

**New DOE process improves
LNG export approval timeline**

**Exports would likely be well-
below full facility capacity**

Sierra Club, frequently cite the potential for increased natural gas production as a reason why the applications should be rejected.

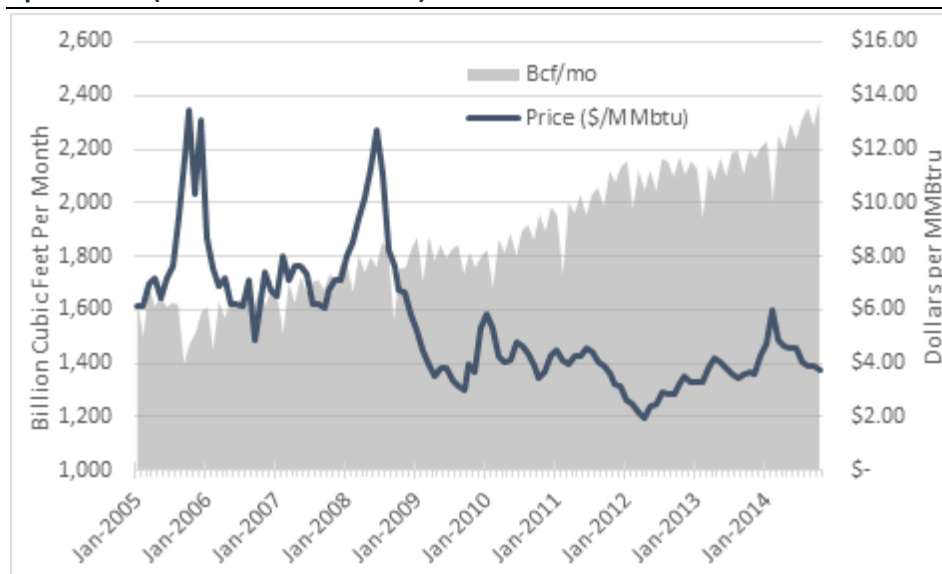
An interesting case may be developing in the northeast, where gas pipeline constraints have caused winter electricity prices to spike. There is momentum to build new gas pipeline capacity into the region to help alleviate those winter price spikes, but the extra capacity would not be necessary during the rest of the year. There is the possibility that the extra capacity could be used to supply the Canaport LNG facility in New Brunswick which has filed with the Canadian government for LNG export. While exports from Canaport facilities could happen this year, additional northeast pipeline capacity would be used to supply electricity generators during peak winter times. This may lead to a wider discussion of whether pipeline capacity should be built to facilitate LNG exports or reserved for meeting firm demand from local distribution companies and electric generators.

Infrastructure and Shipping Costs Could Limit U.S. Exports to Only a Fraction of Future Global Trade

The plummeting price of U.S. natural gas from 2005 to early 2012 coincided with a boom in U.S. shale gas production (Figure 1). U.S. marketed natural gas production has steadily increased since 2005, and it is currently approaching record levels of 2.5 billion cubic feet per month. The production boom and low prices raised LNG export interest, as international LNG prices remained high (~\$10-\$15/MMBtu). Although domestic LNG prices have trended up since 2012 lows, disparities with international prices (~\$8-\$12/MMBtu) still exist.

Global LNG price disparities are tightening

Figure 1 – Monthly U.S. Marketed Natural Gas Production and Henry Hub Spot Prices (Jan. 2005 – Oct. 2014)



Source: EIA, EnerKnol Data

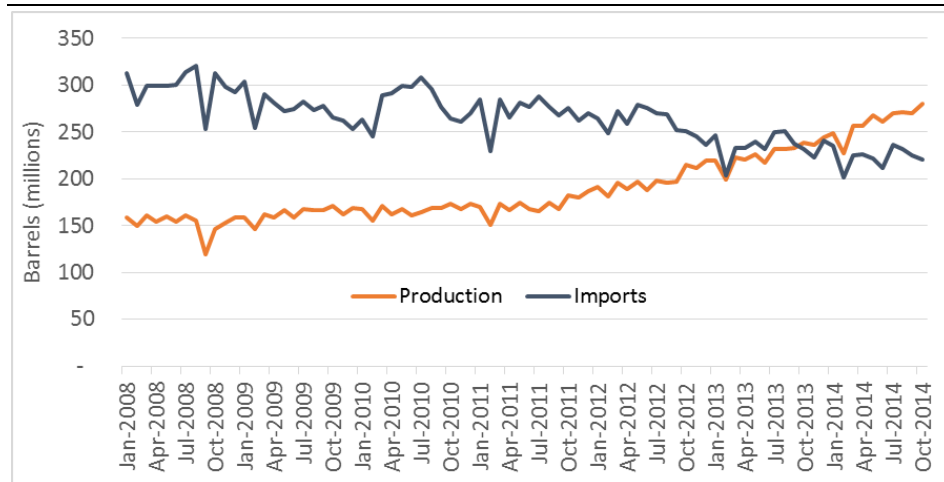
As of December 15, 2014, the DOE had issued five final and four conditional approvals for LNG export to non-FTA countries. The final approvals amount to 5.74 Bcf/d of LNG export capacity. The conditional approvals amount to 4.82

Bcf/d export capacity. Further streamlining the non-FTA LNG export application process will enable the domestic natural gas industry to more rapidly pursue international markets. However, increasing domestic consumption of natural gas for power generation and tightening global natural gas price disparities will likely limit ultimate export levels.

Crude Oil Export Argument Renewed with Depressed Prices

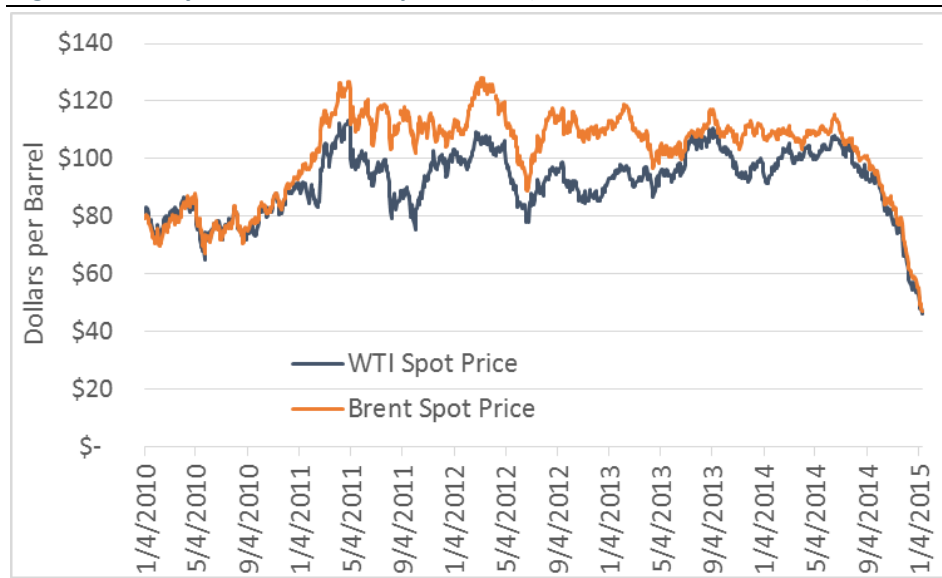
Lifting the crude oil export ban would allow domestic producers to access global price disparities. However, refiners and consumers have opposed exports due to potentially higher associated prices. A combination of factors including a domestic crude oil supply glut, production outpacing imports (Figure 2) and depressed prices have all rekindled the push to lift the ban on crude oil exports. U.S. crude oil exports to countries other than Canada from the lower 48 states have been prohibited since 1975 through the Energy Policy and Conservation Act (EPCA) of 1975.

Figure 2 – Monthly U.S. Crude Oil Production and Imports



Source: EIA, EnerKnol Data

Benchmark WTI and Brent crude oil prices have dropped more than 50 percent since June 2014, largely as a result of consistently increasing domestic production and sustained Middle East output. This is combined with lagging demand growth (Figure 3). Lifting the export ban on the lower 48 states would allow producers to access global price disparities and demand in Asia and Europe. Supporters of lifting the ban also argue greater market efficiency through free trade and domestic job growth with increased production. Export opposition includes domestic refiners and much of the public because allowing exports could put upward pressure on currently low domestic crude oil prices.

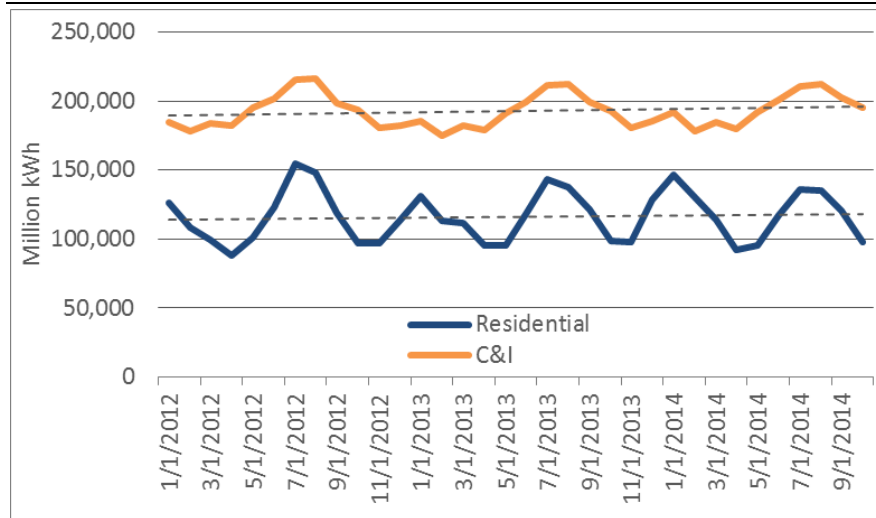
Figure 3 – Daily WTI and Brent Spot Prices (Jan. 1, 2010 – Jan. 12, 2015)

Low crude oil prices could impact U.S. production growth

Source: EIA, EnerKnol Data

Comprehensive Energy Efficiency Bill Would Impact Utilities and Energy Efficiency Industries

The prospect of dramatically higher energy efficiency would impact many facets of the energy industry, but particularly utilities that service regions with federal customers and energy efficiency companies that would address new building codes and other requirements. The recently introduced amendment to the Keystone bill, the Energy Efficiency Improvement Act of 2015, was a pared down version of the Energy Savings and Industrial Competitiveness Act (Shaheen-Portman bill) from the prior Congress. The Shaheen-Portman bill contained provisions with major impacts on buildings, manufacturers and the federal government, with a particular emphasis on the commercial and industrial (C&I) sector. Since C&I facilities are generally larger than residential houses and thus consume significantly more electricity, the incorporation of energy efficient measures at a single C&I location can result in substantial kilowatt-hour (kWh) savings. Passage of a federal energy efficiency bill could reverse the slightly upward C&I electricity usage trend that has occurred over the previous three years (Figure 4).

Figure 4 – Residential and Commercial/Industrial Electricity Consumption

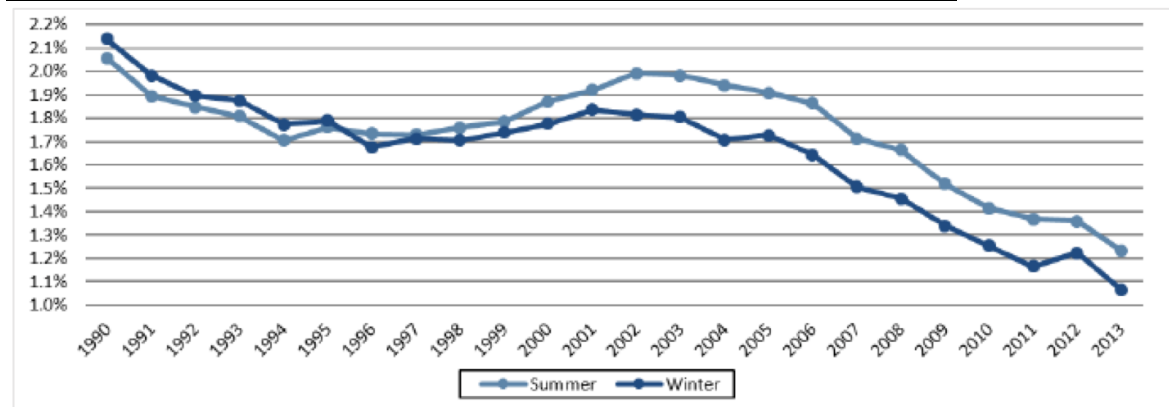
Source: EIA, EnerKnol Data

Utilities Could Face Reduced Sales with Federal Energy Efficiency Rule

The emphasis on electricity reduction would have economic implications for both utilities and the energy efficiency industry. Utilities with large concentrations of federal facilities in their service territory could be at risk of losing substantial sales if a comprehensive energy efficiency bill becomes law. For example, companies such as PEPCO, which serves Washington D.C. and SDG&E, with a large concentration of navy bases in San Diego, could be at risk of diminishing sales from their federal customers.

Another potential impact from an energy efficiency bill is in how new building codes and the adoption of new technologies would affect peak energy usage. There are seasonal electricity usage patterns, with demand typically peaking in the summer when air conditioners are running. Since transmission infrastructure and generating resources are built to handle peak demand, new infrastructure often has to be built to handle a small amount of new incremental load. New building codes are effective in lowering peak demand by requiring efficient lighting, insulation and HVAC equipment. This is different from distributed generation resources, which usually don't reduce actual usage, but rather reduce the need for certain types of generating sources or simply shift peak system demand back further in the day. An energy efficiency bill with far-reaching implications for both the residential and commercial sector would likely affect peak load and contribute to the declining peak demand growth trend (Figure 5).

Figure 5 – NERC-Wide 10-Year Compound Annual Electricity Demand Growth Rate



Source: NERC

The end result of declining peak demand growth would be less build-out of transmission infrastructure and generation of sources to handle peak load. This, in turn, would mean fewer assets in a utilities' rate base that they can earn a return from. This may force utilities and merchant power generators to look for expansion opportunities in areas where peak demand may still be increasing or for other revenue opportunities outside of transmission and generation.

Energy Efficiency Requirements Would Support Energy Efficiency Industry Growth

On the other side, adding additional energy efficiency requirements to new buildings would expand energy efficiency industries and ancillary sectors associated with those industries. Energy efficiency spending has grown rapidly over the last decade, with more than \$7 billion spent on energy efficiency in 2012 alone.

Energy efficiency is both a "push" and "pull" industry. Some portion of the industry is driven by customers wanting to lower their bills and be more comfortable in their homes and businesses. A large portion of the industry is driven purely by the necessity to comply with regulations. In its 2014 Clean Energy Industry Report, the Massachusetts Clean Energy Council (MassCEC) asked in-state energy efficiency firms about policies and programs that could potentially have the largest impact on their business (Figure 6). The third most common answer was "Regulations on Building or Energy Codes." By strengthening building codes and providing training for commercial building design, the passage of provisions like those in the Shaheen-Portman proposal would have significant impacts on energy efficiency businesses by increasing the demand for their products and services. On the other side, firms were also asked about the biggest impediments to success, and regulations were once again a frequently cited source.

Figure 6 – MassCEC Energy Efficiency Firm Survey Results

Policies or Programs with Greatest Potential Impact for EE Programs	Percent	Barriers or Impediments to Business' Success for EE Firms	Percent
Incentives or tax breaks/credits	23%	Regulations or taxes	18%
Rebates	16%	Poor market conditions and the economy	13%
Regulations on building or energy codes	12%	Costs	13%
Loans/grants or subsidies	7%	Bureaucracy/government	8%
Financing for consumers	5%	Marketing/educating customers	7%
SREC program	4%	Difficulty finding employees	7%
Changing net metering	4%	Financing or funding	4%
Renewable Portfolio Standards	2%		

Source: MassCEC

Proposed Emissions Regulations Would Impact Fossil Fuel-Fired Generators and Fuel Producers

Republicans have vowed to block proposed EPA and other Executive Agency regulations, many of which are required by statute for promulgation in 2015. If promulgated, the net impact of these regulations would add costs to recently constrained fuel producers and significantly shift the U.S. power generation mix. If blocked, states would retain primary regulation over fuel producers, and the generation mix would continue to be largely driven by existing upcoming regulations and fuel economics.

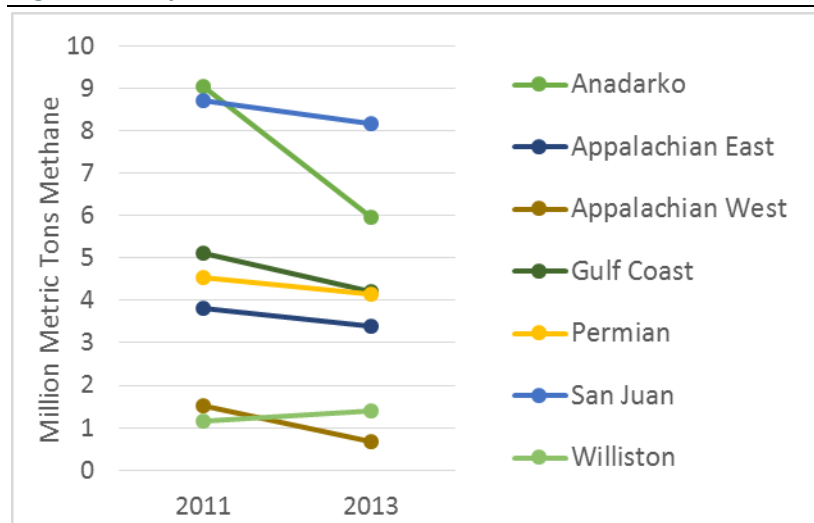
The following examines net impacts of several administration regulations anticipated for 2015: the proposed EPA standards for methane emissions, DOI drilling regulations on federal lands, EPA Clean Power Plan and EPA emissions regulations for new fossil fuel-fired power plants. Impacts of the recently upheld EPA Mercury and Air Toxics Standards and the Cross-State Air Pollution Rule are also discussed.

Combined Costs Add Up for Proposed EPA Methane Rules

The EPA's proposed goal to reduce methane emissions from oil and gas producers by 40-45 percent by 2025 from 2012 levels would require wide-scale reduced emission completion (REC) or "green completion" technology and associated pipeline infrastructure deployment.

Methane reductions have declined in nearly all major basins from 2011-2013 (Figure 7). REC technologies are already in use in some shale regions, primarily in the Bakken (ND, MT) and Eagle Ford (TX) basins due to high pressure and quantity of salable gas during the well completion process. However, flaring is the current method most commonly used by industry to prevent methane emissions due to the higher costs and infrastructure requirements of RECs. Currently, the Bakken and Eagle Ford regions are in most need of extended pipeline infrastructure for REC utilization, due to the regions' high development rates.

Methane emissions are declining in the majority of U.S. oil and gas basins

Figure 7 – Reported Methane Emissions from Various U.S. Basins (2011-2013)

Source: EPA

The recent oil price decline from \$100+ per barrel (bbl) to approximately \$50/bbl could threaten the consistent growth trend in domestic oil and gas production. If low oil prices continue through 2016 and EPA methane regulations are significantly more stringent than state regulations and incentive-driven capture operations, methane emission compliance costs would put increased financial strain on exploration and production companies.

The Western Energy Alliance, which represents 400-plus members, including top producers ExxonMobil, Chesapeake Energy Corporation, Devon Energy, and Conoco Philips, strongly opposes the regulation, saying it would be costly and “choke out a source of economic growth.” In addition, according to the Natural Gas Supply Association, the natural gas industry already has an economic incentive to capture and utilize methane as byproduct feedstock. The O&G lobby has connected with powerful Republicans with stated 2015 agendas to scrutinize EPA rules, such as Senate Environment and Public Works Chairman Jim Inhofe (R-OK), who said the methane regulations are “designed to stifle our domestic energy industries, despite the successful voluntary steps made by U.S. oil and gas companies to reduce methane emissions,” and that the EPA mandate would “increase the cost to do business in America.”

DOI HVHF Rule to Increase Drilling Costs Through Well Casing Tests

The Department of Interior (DOI) Bureau of Land Management (BLM) estimates that its proposed high volume hydraulic fracturing (HVHF) rules would cost industry an estimated \$12 to \$20 million per year. The added costs are largely attributed to required cement evaluation logs (CELs) for well-bore casing tests. According to Steven Wells, Division Chief at the BLM, the final rule has stalled largely due to program implementation funding.

The original rule, published on May 12, 2012, was widely criticized by industry, states and environmental groups for its lack of specificity. The current revised draft, published in the Federal Register on May 24, 2013, aims to facilitate coordination with existing state and tribe standards, avoid duplicative reporting requirements, increase flexibility for oil and gas developers and streamline compliance efforts. The revised draft retains the three main requirements of the initial version: public disclosure of fracturing chemicals, verification of well-bore integrity and establishment of proper flow-back water management plans.

Figure 8 – Federally-Administered O&G Activity in the Western U.S. (2013)



Source: BLM

The proposed rule requires operators to disclose the chemicals used in hydraulic fracturing processes by using the industry-recognized FracFocus.org database to increase reporting efficiency and avoid duplication with state and tribe requirements. The revised rule would not require pre-drilling fluid disclosure.

Execution of CELs on the casing strings protecting usable water is not typically run by operators on the surface casing. In some cases, it's not on intermediate casing either (if not required by state regulations). Therefore, once implemented, the rule would increase steps and costs related to the drilling process. The revised 2013 proposed rule requires more generic use of CELs rather than cement bond logs (CBL) for a broader inclusion of logging methods.

Clean Power Plan Could Threaten Regional Reliability

The EPA-proposed Clean Power Plan (CPP), in its current form, could threaten regional electric reliability by forcing generation retirements in regions with declining reserve margins. The CPP proposal was issued on June 2, 2014.

It outlines the first emission guidelines for existing fossil-fuel-based power plants, with a goal to reduce power sector emissions by 30 percent by 2030 relative to 2005 levels. It provides state-specific, rate- or mass-based targets to reduce power plant carbon dioxide emissions and guidelines to develop, submit, and implement state plans to meet the targets. The CPP outlines four “building blocks” to achieve the proposed emissions reduction goals including power plant efficiency (heat rate) improvements, fuel-switching (primarily coal to natural gas), increased renewable and nuclear generation and reduced energy demand growth through energy efficiency.

On January 7, 2015, the EPA announced a revised schedule to finalize rulemakings for power plant emission standards under its CPP. By mid-summer 2015, the EPA aims to finalize the rules and propose a federal program to cover states that do not submit emissions reduction plans.

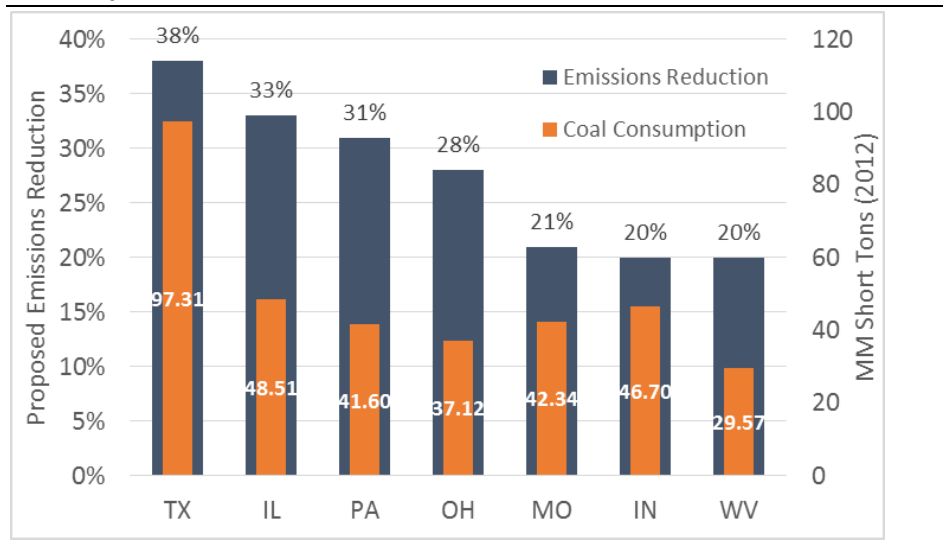
The Clean Power plan compliance timeline is as follows:

- Summer 2016 – proposed due date for states to submit compliance plans (complete plans or initial plans with one- to two-year extension requests) and final federal plan to meet goals in areas that do not submit plans
- Summer 2017 – proposed due date for compliance plans with one-year extension
- Summer 2018 – proposed due date for multi-state compliance plans with two-year extension
- Summer 2020 – proposed beginning of the Clean Power Plan compliance period

The proposed plan has the potential to significantly impact coal-reliant states with ripple effects across all energy sectors. Texas leads the nation in coal consumption, but its access to natural gas and renewable power will help ease future compliance obligations. Natural gas and renewable energy currently make up approximately 54 and 9 percent of the Electric Reliability Council of Texas (ERCOT) region’s energy mix, respectively. ERCOT natural gas, wind energy, solar energy, energy efficiency and demand response would all likely increase to meet CPP rules.

The Midcontinent ISO (MISO) covers all, or portions of, 16 states, many of which are coal-reliant states with current low levels of renewable energy capacity. The region relied on coal-fired capacity of more than 70 GW for approximately 70 percent of its annual electricity generation in 2013. MISO estimates the proposed CPP to threaten 14 GW of coal-fired capacity, which, when combined with EPA’s Mercury and Air Toxics Standards, could add up to more than 25 GW of coal-fired capacity retirements. The region will continue its shift toward more natural gas and wind generation sources, which currently combine to provide approximately 20-25 percent of the region’s electricity.

Missouri and West Virginia may find compliance more difficult, as they currently rely on coal-fired capacity for approximately 83 and 93 percent of electricity generation, respectively.

Figure 9 – Select State Emissions Reduction Goals and 2012 Coal Consumption


Source: EPA, EIA, EnerKnol Data

CPP Energy Efficiency Goals Difficult to Achieve without Supportive State Programs

The EPA outlines energy efficiency-driven annual energy use reductions as a percent of the prior year's electric sales for each state, plateauing at 1.5% by 2025 and continuing thereafter. Several states – Rhode Island, Massachusetts and Hawaii – are already well-above EPA-proposed 2025 energy efficiency targets with the help of energy efficiency resource standards (EERS) and utility revenue decoupling programs. These states may have exhausted many energy efficiency “low hanging fruit” opportunities and would likely turn to other methods of coal-to-gas switching and increased renewable energy to achieve emissions reduction goals.

Energy efficiency opportunities may exist for states lacking notable metrics for it, such as Virginia, Kansas and Louisiana. However, these states may also focus emissions reduction efforts on fuel switching and increased renewable energy, depending on associated infrastructure costs and unique system demand.

Table 4 – Lagging States in Meeting EPA-Proposed 2020 EE Targets

State	EE as % of Retail Sales		Δ	EERS?	Decoupling?	Performance Incentives?
	2013	2020 (EPA)				
Maine	0.78%	1.50%	0.72%	No	No	No
Nebraska	0.20%	0.89%	0.69%	No	No	No
New Mexico	0.54%	1.16%	0.62%	Yes	Yes	Yes
Tennessee	0.28%	0.90%	0.62%	No	No	No
Alabama	0.06%	0.66%	0.60%	No	Yes	Yes
Kansas	0.02%	0.62%	0.60%	No	Yes	No

Source: EPA, ACEEE, EnerKnol Data

Proposed New Source Performance Standards would Challenge New Coal-Fired Capacity

EPA's proposed "Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units" would eliminate new coal-fired generation construction without carbon capture and storage (CCS) technology. Broadly, the proposed rule aims to limit emissions from new fossil fuel-fired electric utility generators greater than 25 MW capacity, including utility boilers and natural gas-fired stationary combustion turbines. The draft rule outlines:

- **Natural gas-fired stationary combustion turbines** – EPA is proposing two limits: 1,000 pounds of carbon dioxide per megawatt-hour (lbCO₂/MWh) for units of 85 MW capacity at a 10,000 Btu/kWh heat rate; and 1,100 lbCO₂/MWh for smaller units. New natural gas-fired stationary combustion turbines can meet the proposed rule without additional emissions technology add-ons.
- **Coal-fired utility boilers** – The proposed limits are based on the adoption of carbon capture and sequestration (CCS) technology. The proposed limits are 1,100 lbCO₂/MWh over a 12-month operating period; and 1,000-1,050 pounds of carbon dioxide per megawatt-hour over an 84-month operating period.

A key question is the extent to which new fossil-fuel utilities will be able to comply if CCS technology is required. Critical to this question is the technology readiness level of CCS, and whether the technology represents the best system of emission reduction (BSER) as required by the Clean Air Act. The BSER must meet demonstrated cost, energy and environmental criteria.

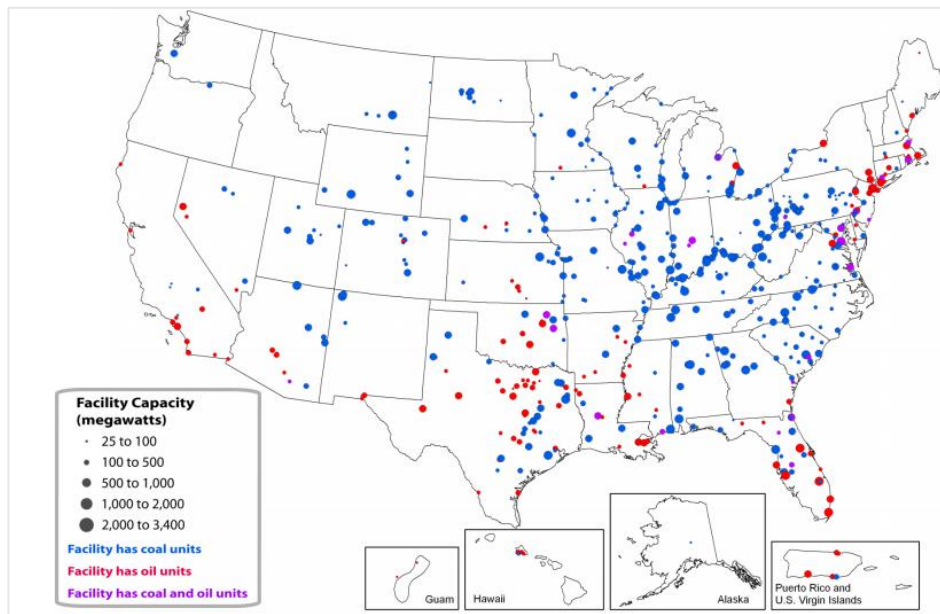
Republican lawmakers, including Rep. Shimkus (R-IL) and Rep. Barton (R-TX) have noted that the CCS technology has not yet been proven at a commercial scale and that the requirement will essentially prevent additional coal plants from coming online. When asked specifically, Energy Secretary Moniz said that the CCS technology for combustion or gasification is at the demonstration level, but that for sequestration, at least one plant is storing 20 million tons, or 60 megatons/year. However, the EPA notes in its draft rule that, "current and planned implementation of CCS projects, combined with the widespread availability and capacity of geological storage sites, makes it clear that the technology is feasible."

EPA Mercury and Air Toxics Standards the Largest Near-Term Concern for Fossil Fuel-Fired Generators

Since 2011, the EPA Mercury and Air Toxics Standards (MATS) has been the most pressing regulation for approximately 1,400 generation units of 25 MW or greater, 1,100 (approximately 310 GW) of which are coal-fired (Figure 10). EPA initially estimated 4.7 GW of coal-fired capacity to retire by 2015 due to

this rule. Due to additional financial challenges from low natural gas prices, the EPA estimate has proven to be low. More than 20 GW of coal-fired capacity have retired since 2011. The Energy Information Administration's (EIA) 2014 Annual Energy Outlook projects nearly 60 gigawatts (GW) of coal retirement by 2020, with 90 percent of retirements taking place before 2016. NERC estimates approximately 40 GW of coal-fired capacity to retire by 2020.

Figure 10 – Facilities Covered by MATS



Source: EPA

EPA finalized its MATS rule in December 2011 to limit emissions of mercury and other heavy metals from fossil fuel-fired power plants, which are the largest emitters of toxic metals in the U.S. The standard became effective April 16, 2012, with a multi-year phase-in design.

MATS implementation was designed to minimize challenges to the U.S. electricity supply. Compliance begins in April of this year. However, as of October 2014, 133 units have been granted compliance extensions. EPA notes that “reliability critical units” will be given a fifth year, until April 2017, to meet new standards or be retired. Beyond 2017, compliance will be addressed on a case-by-case basis to safeguard grid reliability.

Industry participants, utilities, systems operators and politicians have been vocal about the potential for these rules to disrupt electricity supply. In particular, there are concerns surrounding the possibility that coal-fired power plants may be retired prematurely in light of carrying out potentially expensive retrofits to comply with EPA regulations. Coal-fired generation accounted for approximately 39 percent of the U.S. electricity supply in 2013 and is heavily relied upon in many regions of the U.S., especially the Midwest. According to the U.S. Government Accountability Office (GAO), electricity prices could rise from one percent in California, to about six percent in the region covering

Kansas, Oklahoma, and parts of New Mexico, Texas, Louisiana, Arkansas and Missouri.

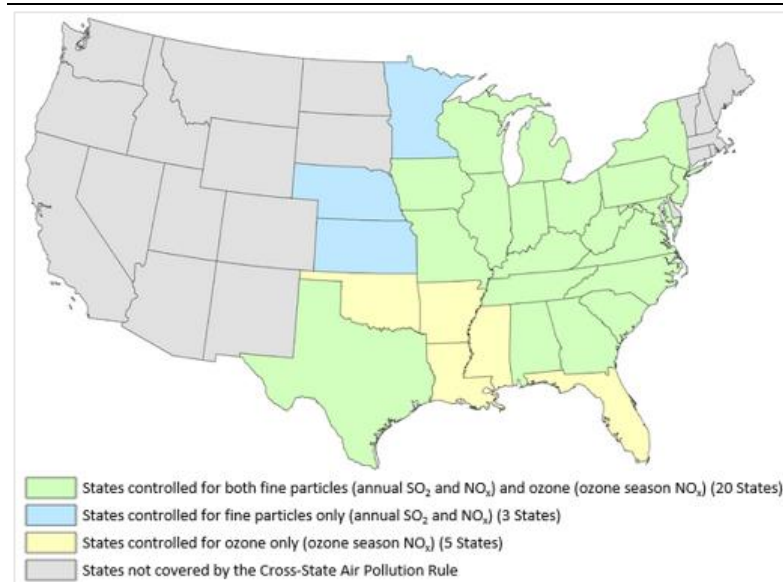
Cross-State Air Pollution Rule Compliance Costs Limited by Overlapping MATS Regulation

The EPA projected the annual industry compliance costs for its Cross-State Air Pollution Rule (CSAPR) at roughly \$800 million per year. However, CSAPR cost impacts will likely be lower than initially estimated, as MATS-related emissions control installations will cover much of the needed compliance costs.

CSAPR builds on previous regulations to limit SO₂ and NO_x emissions from fossil fuel-fired generation plants 73 and 54 percent from 2005 levels, respectively. The final rule will create three new pollutant cap and trade programs – SO₂, annual NO_x, and seasonal NO_x – affecting fossil fuel-powered sources across 28 states and the District of Columbia (Figure 11).

CSAPR is referred to as the “Good Neighbor Provision” of the Clean Air Act, and it aims to prohibit emissions that interfere with neighboring states’ ability to meet National Ambient Air Quality Standards (NAAQS), which set limits on the six CAA pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particle pollution and sulfur dioxide. CSAPR designates “nonattainment” areas where concentration of regulated pollution exceeds the NAAQS. It requires states to submit a state implementation plan (SIP) to address emissions reductions. The plans must be submitted within three years of any new NAAQS. The EPA has authority to deem SIPs inadequate, after which EPA has two years to implement a Federal Implementation Plan (FIP).

Figure 11 – Breakdown of CSAPR-Covered States



Source: EPA

On October 23, 2014 the U.S. Court of Appeals for the District of Columbia Circuit (Appeals Court) granted EPA's motion to lift the stay of CSAPR and delay its deadlines by three years. CSAPR Phase I emissions budgets apply in 2015 and 2016 (instead of 2012 and 2013) and Phase II emissions budgets and assurance provisions apply in 2017 and beyond (instead of 2014 and beyond).

Next Steps: Regulations and Economics Continue to Drive Generation Mix Shift

In addition to improving and securing the current electric grid, power supply and associated emissions are also under increased scrutiny. Current and upcoming EPA emissions standards will place burdens on fossil-fired generation and will cause many plants to decommission in light of high compliance costs for aging assets. Certain regions, especially the Midwest, will feel the brunt of these standards due to heavy reliance on coal-fired generation. EPA regulation enforcement must have regional flexibility, so it will not threaten grid reliability due to extensive power plant retirements. Tightening regional carbon trading caps, the specter of the Clean Power Plan, Mercury Air Toxics Standards and the Cross-State Air Pollution Rule will all have significant impacts on the electric power industry.

The cumulative effect of these policies will drive down coal-fired electricity generation while increasing natural gas baseload generation, particularly combined cycle plants. In some regions, generators have easy access to natural gas. In other regions, however, gas pipeline capacity is constrained. States and ISOs are developing creative solutions to fund natural gas pipelines. One idea proposed to FERC involved charging electricity customers for the cost of a new gas pipeline to supply electric generators. Going forward, it is likely that additional innovative natural gas pipeline funding ideas will be sought to replace the current practice of funding by local distribution companies. This practice leaves electric generators counting on leftover gas supplies after all firm demand contracts are met.

The aforementioned policies will also likely increase the amount of generation from renewable resources and the amount of electricity generated by distributed resources. Interconnecting renewable resources and distributed generation can pose a problem for utilities and ISOs. Standardized interconnection requirements and procedures will take on a higher importance. Using demand response as a resource to smooth out variability caused by renewable resources will also be crucial. As federal authority to regulate some of these issues is challenged, more regional or state bodies will become involved in charting the path forward.

Disclosures Section

RESEARCH RISKS

Regulatory and Legislative agendas are subject to change.

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