



Energy

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Overview of the current energy mix, and the place in the market of different energy sources

Resilient markets

In 2010, only two years after the 2008–09 economic downturn, the oil and gas industry basked in crude prices exceeding US\$100 per barrel. But by early 2015, prices had dropped to below US\$50. The industry's response was quick and has been dramatic, with large staff layoffs, deep cuts to capital budgets, and bankruptcies or sales of challenged companies. The market itself has stabilised, with prices centring on the high US\$40s.

Although there are no expectations of a significant price increase for oil or gas in the near future, the industry has not experienced either a collapse or a huge cutback in production. Resilient strategies employed by the industry, including cost reduction, emphasis on operational efficiency, and new technology adopted especially by producers of shale and other unconventional resources, ensured survival. Large firms adopted varying strategies to secure future growth, pursuing short-cycle domestic shale oil projects, engaging in takeovers of smaller companies, and betting on exploration in new foreign markets.

Shifts in the energy mix

The Energy Information Administration (EIA) reported that total primary energy consumption in 2016 in the U.S. was 97.4 quadrillion British thermal units (Btu), a slight increase from 2015 levels. Fossil fuels presently account for the large majority of U.S. energy consumption (81%), with petroleum and natural gas usage increasing in 2016, but coal usage steeply declining for the third year in a row. Nuclear energy consumption was roughly flat, but the rates of growth of renewable sources were high (wind up nearly 20%, solar 37%, hydro 7%), albeit from lower base levels.

The transportation sector is by far the largest consumer of petroleum in the U.S., while the largest users of natural gas remain the industrial and electric power sectors. Annual total electricity consumption in the U.S. decreased in 2016 by 1%, the result of slight declines in usage by the commercial, industrial, and transportation sectors, while consumption by the residential sector was slightly up for the year. Natural gas as well as renewable sources saw the greatest increase in contribution to power generation, with the use of coal and petroleum decreasing. In the first five months of 2017, hydroelectric was on pace to outperform its 2016 usage for electricity generation by nearly 13%, solar by 46%, and wind by 15%.

Coal's changing futures

We have seen a significant decline in U.S. coal consumption by the electric power sector (down 8% from 2015) and the industrial sector (down 11%). Coal use as a product for

domestic consumption has been trending downward for several years. In addition, total domestic production of coal declined by 19%, which amounted to the lowest production level since the 1970s.

However, in 2017, coal experienced an uptick in production, domestic consumption, and especially exports. U.S. coal has found expanded markets in East Asia and there have been improvements in the infrastructure required to transport Western coal to Pacific Ocean ports, although there remain permitting challenges for proposed export facilities on the West coast. The first eight months of 2017 showed a 14% increase in production as compared to the same period in 2016. Consumption for the first five months of 2017 was up by 7%, and exports for the first six months of 2017 were 55% higher than over the same period in 2016. Time will tell if the overall trend for production and use of coal in the U.S. remains in decline, as renewables and natural gas become the preferred energy sources, or if coal-friendly policies by the new administration help boost its outlook.

Nuclear challenges

The U.S. nuclear industry has recently absorbed several setbacks. Of the four new reactors whose development continued after the Fukushima incident, two in South Carolina stopped construction and the remaining two in Georgia are the subject of public utility commission review. In September 2017, the Trump administration issued US\$3.7 billion in conditional loans to backstop the Georgia project. The Westinghouse bankruptcy and potential sale also mark a change in eras. While construction of new nuclear facilities in the U.S. has proved challenging, nuclear energy remains an important source of energy in the U.S. and accounts for approximately 20% of total electricity generated. Although it does not appear that the market share for nuclear will increase significantly in the near future, given the costs, it may remain stable through optimising generation at, and relicensing, existing facilities.

Changes in the energy situation in the last 12 months which are likely to have an impact on future direction or policy

Opening federal lands to energy development

Debate has lasted decades on how to balance the use and the protection of federal lands. The recent change in administrations has brought these values to the forefront, with new proposals by President Trump and his cabinet members to increase energy exploration and development on federal lands.

The extent of public land ownership and control in the U.S. is sometimes forgotten in discussions of development by private enterprise. The federal government, primarily through its Department of Interior (DOI), Department of Agriculture (USDA), and Department of Defense (DOD), owns and manages approximately 260 million hectares of land onshore in the U.S., as well as approximately 690 million hectares offshore. Depending on which agency administers the federal land, varying degrees of energy exploration are permitted. For example, the Bureau of Land Management (BLM), which is part of the DOI, manages approximately 100 million hectares of public land and has a multiple-use, sustained-yield mandate that supports a variety of programmes and activities, including energy exploration and development. On the other end of the spectrum is the National Park Service (NPS), also part of the DOI, which manages approximately 32 million hectares of land with a mandate to conserve lands, and which generally prohibits energy exploration.

On March 28, 2017, President Trump signed the Executive Order on Promoting Energy Independence and Economic Growth, which includes provisions aimed at eliminating or

loosening regulations surrounding energy exploration and development on onshore federal lands. As part of this Executive Order, President Trump ordered the Secretary of Interior to lift all moratoria on federal land coal leasing activities, and to suspend, revise, or rescind rules relating to hydraulic fracturing on federal lands. In addition, President Trump issued the Executive Order Implementing an America-First Offshore Energy Strategy on April 28, 2017, which included a requirement for the Secretary of Interior to revise the five-year offshore oil and gas leasing programme currently in effect for 2017–2022 to include lease sales in additional planning areas, such as the Mid- and South Atlantic, and to increase the number of scheduled sales under the programme. The Bureau of Ocean Energy Management (BOEM) is currently taking the administrative steps necessary to implement a new leasing programme, which will cover the years 2019–2024.

In addition to the Executive Orders, the DOI is advancing policies that would open the Arctic National Wildlife Refuge (ANWR) to oil exploration. ANWR has long been a point of energy debate in Congress, with proponents of development arguing that the 8 million hectare wildlife refuge is a source of potentially significant domestic oil reserves. However, oil and gas development in ANWR is currently prohibited by law. In a secretarial order signed in May 2017, and followed up by an internal agency memorandum dated August 2017, the DOI expressed its intent to lift restrictions on oil and gas exploration in ANWR, although actual development would still require an act of Congress.

While these two Executive Orders and DOI policy indicate a clear shift in overall government policy for federal land management and use, there remain several administrative hurdles before the policies can be implemented. For example, the DOI estimates that it will take two years to put a new offshore oil and gas leasing programme in place, as it requires a multi-step process that includes multiple decision points and opportunities for public comment. The same is true with respect to many of the other agency rules and regulations President Trump has ordered to be reviewed, rescinded, or replaced. Therefore, while the current administration has taken a very different view than the previous administration of federal lands and energy exploration and development, there are many administrative procedures that must be cleared before new policies can actually be implemented.

In addition, US Interior Secretary Ryan Zinke has proposed to shrink the size of six national monuments, to permit, among other things, energy development. However, it is not clear that energy development will occur on those lands, even if permitted. About 65% of the acreage covered by drilling permits in and around such areas has never been used and there are serious questions as to whether drilling is economic at current prices.

Chinese solar panel tariff petition

In what has been called a case of solar against solar, two solar panel manufacturers with U.S. facilities filed a petition with the nation's International Trade Commission (ITC) seeking to impose a tariff and floor price on imported crystalline silicon photovoltaic solar panels. The petition has divided the solar industry between domestic solar panel facility owners that support the request, and developers that oppose it as increased tariffs would negatively affect much of their business. If tariffs are implemented, some reports suggest that it may result in the price of imported solar modules almost doubling.

The manufacturers, with support from parts of the steel, labour, and agricultural communities, have argued that increasing imports have taken market share from the domestic producers and resulted in bankruptcies, plant shutdowns, layoffs, and deterioration of the financial performance of the domestic industry. The petition claims that 1,200 manufacturing jobs have been lost and that wages have fallen by almost 30% between 2012 and 2016.

Without the safeguards they are requesting, the manufacturers predict that their remaining production operations in the U.S. will be permanently closed.

Those opposing the petition, including the Solar Energy Industries Association and the State of New York, have argued that thousands of jobs are at stake for solar installers and developers. Market reports estimate that the approved petition could endanger two-thirds of utility-scale solar, which is expected to come online in the next five years. Imposing the tariffs will increase the costs of modules, and consequently, the cost of projects, and may result in utilities turning to other sources of energy.

In September 2017, the ITC determined that imported panels are injuring domestic manufacture. It will prepare and submit a report to the President containing findings and recommendations. The President is then to make a decision to implement, change, or deny the remedy altogether. Based on President Trump's election campaign promise of reviving American manufacturing jobs, he may be inclined to provide the relief sought by the manufacturers, which could have a large impact on the future market share and growth of solar in the U.S.

Distributed energy resources

Steadily increasing portions of the new capital expenditures in the sector are being directed at generation and storage improvements and a range of technologies and services located at or directly connected to the facilities of major consumers or consumer groups. Distributed energy resources (DER) include distributed generation, often consisting of primary generation through solar and wind farms, gas-fired microturbines, combined heat and power (CHP) or heat exchangers. They also include fuel cells, flywheels, ice storage, and batteries that can store and convert power. DER also encompasses demand response mechanisms to enable large customers to shift their peak usage, deferring generation and transmission investments. Microgrids permit the integration of DER generation, storage, and energy conservation resources to increase energy efficiency and replicate some of the reliability benefits of a grid without the same level of investment. The technology includes smart-grid innovations carried to the ultimate customer for real-time exchange of information and price signals. DER investments are undertaken to protect against grid outages, accelerate the shift of generation to greener fuel sources, enhance the stability of the voltage and frequency of power, and optimise the organisation's energy costs and utilisation. End-user direct procurement projects accounted for nearly 20% of all new generation capacity in the U.S. in 2016, and investments of over US\$100 billion are expected by 2025.

Developments in government policy/strategy/approach

Energy policy and presidential power

The energy and environmental policy differences between President Obama and President Trump are certainly among the greatest that we have seen following any U.S. election. What President Obama encountered, and what President Trump is experiencing, is that the U.S. political system has a complex set of checks and balances that affect the ability of even a President to transform the country's direction in these fields.

Separation of powers among the executive, legislative and judicial branches of course restricts the capability of a President to affect legislation (like the National Environmental Policy Act), court cases or international treaties or conventions already ratified by the Senate. The Administrative Procedure Act and related laws have detailed procedural requirements binding departments, agencies and commissions of the President's own

executive branch. These provisions include requirements for scientific investigations, and opportunities for notice and public comment, prior to implementation of new or modified regulations. Thanks to the nation's federal system, Presidents must endure the independent actions of individual states and local governments that can limit or even counteract the impact of their own initiatives. And influential private actors and non-governmental organisations can take their own course in energy and environmental matters or seek judicial review of the changes.

Oil pipeline approvals

In an example of the new administration's ability to reverse prior government policy, one of President Trump's first actions upon taking office in January 2017 was to push forward approvals of two major oil pipelines in the U.S. that had been shelved under the prior Obama administration. The first was TransCanada's Keystone XL Pipeline, which would transport Canadian crude oil from Alberta, Canada, to Nebraska, where it would connect with TransCanada's existing pipeline system and eventually make its way to Texas. TransCanada's initial application was submitted in 2008. In 2014, after years of study and amendments, the Obama administration denied the border crossing permit application on the basis that approval would undermine the U.S.'s climate leadership in the international arena. After his inauguration, President Trump invited TransCanada to resubmit its application, and directed the State Department to take all actions "necessary and appropriate" to facilitate its expeditious review, including a final permitting decision within 60 days. The application was resubmitted by TransCanada on January 26, 2017, and was granted on March 23, 2017. However, within days after approval, two environmental groups filed a lawsuit in federal court to stop the project. The litigation is ongoing, and because of legal uncertainty with respect to pipeline routes in Nebraska, TransCanada will not be in a position to begin pipeline construction for at least another year.

The other high-profile oil pipeline project, known as the Dakota Access Pipeline, was also halted under the Obama administration, but has since been approved by President Trump. The Dakota Access Pipeline will transport crude oil from North Dakota to Illinois, and was controversial principally due to its close proximity to two Indian reservations where the pipeline crosses the Missouri River. Challenges to the pipeline had prompted the Department of Justice and Army Corps of Engineers under President Obama to stop the project from going forward. However, when President Trump took office, he issued a Presidential Memorandum directed to the acting secretary of the Army to review the project and take all appropriate actions to construct and operate it. In February 2017, the Army Corps of Engineers issued an easement for construction and operation of the pipeline, foregoing the detailed environmental review that had delayed the project under President Obama. In late March 2017, the last segment of the pipeline was completed and it became fully operational in June 2017.

Developments in legislation or regulation

After Paris, or back to Paris?

President Trump has endeavoured to revise or reverse numerous energy-related policies during his first year in office. Many of his actions relate to initiatives based on concerns with climate change. In 2015, the U.S. executive branch joined nearly 200 other countries in adopting the Paris Climate Accord. Under its terms, the U.S. pledged to cut its greenhouse gas emissions by 26 to 28% below 2005 levels by the year 2025. President Obama anticipated achieving these goals in large part through implementation of the

Clean Power Plan (CPP). The CPP was a cornerstone regulation developed to cut carbon emissions from power plants – particularly coal-fired power plants.

In March 2017, President Trump called on the administrator of the Environmental Protection Agency (EPA) to take steps to dismantle the CPP, and the EPA has since begun the administrative process to accomplish that task. On June 1, 2017, President Trump formally announced that he was against proceeding under the negotiated terms of the Paris Climate Accord, and would attempt either to renegotiate the terms or to enter a new agreement, reasoning that the Paris Climate Accord disadvantages the U.S. economy. The U.S.'s pledge under the Paris Climate Accord accounted for 21% of the emissions reduction that the agreement sought to achieve. Other major signatories of the Paris Climate Accord have announced that it is not subject to renegotiation.

Without more, the federal government's actions do not mean that the U.S. will stop reducing its greenhouse gas emissions. For example, the transition in the U.S. to renewable energy is likely to continue due to declining costs of renewable technologies such as solar and wind, as well as state statutes (presently existing in 29 states) that require utilities to purchase a certain percentage or amount of renewable electricity. In addition, state and local jurisdictions have committed to continuing their efforts to address climate change, as evidenced by the commitments expressed by the governors of California, New York and Washington in the wake of President Trump's announcement regarding Paris. State legislatures have taken action to achieve emissions reductions, including legislation in California requiring a reduction of state-wide greenhouse gas emissions by the year 2020. In June 2017, Hawaii became the first state to pass legislation which implements parts of the Paris Climate Accord by setting forth strategies to reduce greenhouse gas emissions within the state, and explore carbon sequestration techniques.

Finally, numerous large private companies in the U.S. have also made commitments to reduce their greenhouse gas emissions. Since November 2016, 1,000 companies have signed the "Business Backs Low-Carbon USA" statement. In addition, nearly half of the Fortune 500 biggest companies in the U.S. have set targets to shrink their carbon footprints, including almost two dozen that have pledged to power their operations with 100% renewable energy by set deadlines.

Hydraulic fracturing

The new administration has focused attention on the 2015 BLM hydraulic fracturing rules regulating hydraulic fracturing operations on federal and Indian lands. The regulations had been the subject of litigation in federal court and were stayed pending review of the lower court decision by the Tenth Circuit Court of Appeals. In his Executive Order issued in March, President Trump directed the Secretary of the Interior to review the rules; in July 2017, BLM proposed to rescind the regulations. As with other administrative agency actions, full rescission of these rules could take over a year to complete. In the meantime, states and local governments continue to regulate hydraulic fracturing, and all 32 states with federal oil and gas leases have laws or regulations that address hydraulic fracturing operations. Therefore, even in the absence of federal regulation, operators will still be required to comply with a host of requirements to conduct their operations.

Offshore oil platform decommissioning

In the offshore oil and gas arena, the Trump administration suspended financial security requirements that BOEM had attempted to impose through a September 2016 Notice to Lessees. Because BOEM did not undertake formal rule-making to impose the requirements in the first instance, the Trump administration was able to unilaterally suspend the Notice

without going through a lengthy administrative process. The new policy had sought to require offshore oil and gas leaseholders to provide surety bonds or other security to guarantee future decommissioning obligations. The policy came about as a result of a government study which found that billions of dollars' worth of future decommissioning liability in the Gulf of Mexico was largely unsecured and that the U.S. was therefore at risk of bearing the costs if operators and lessees defaulted. The Trump administration promptly suspended the new bonding requirements for most lessees in January 2017, and is undertaking a review of alternative means of securing the future decommissioning costs of offshore oil platforms.

Judicial decisions, court judgments, results of public enquiries

Agency review of downstream climate impacts

The Federal Energy Regulatory Commission (FERC) is responsible for approving major gas pipeline projects in the U.S., and has previously held the position that the National Environmental Policy Act (NEPA) does not require it to take into account indirect climate change impacts as they are too speculative. However, in *Sierra Club v. FERC*, the federal D.C. Circuit Court of Appeals held in a 2-1 ruling in August 2017 that FERC's approvals must include a detailed analysis of downstream greenhouse gas emission impacts, including impacts from power plants the pipeline will serve. The Court's ruling vacated FERC's approval of the multi-billion-dollar Southeast Market Project, which includes a 515-mile-long pipeline running from Alabama to Florida.

NEPA requires federal agencies to consider "reasonably foreseeable" indirect effects of proposed projects, unless the agency approval is not the "legally relevant cause" of such effects. The majority of the Court's panel found that the burning of gas and release of greenhouse gases by power plants that would be serviced by the Southeast Market Project are indirect effects that are "reasonably foreseeable". Further, the court emphasised that under NEPA, analysis of indirect effects includes "educated assumptions" by federal agencies. Since FERC was able to estimate the Southeast Market Project's pipeline capacity, it was not clear to the Court why FERC could not use this data to estimate the greenhouse gas emissions from the power plants serviced by the pipeline. However, the Court noted that if downstream greenhouse gas emissions were too speculative to quantify, FERC could fulfil its obligation under NEPA by providing a specific explanation as to why estimation of downstream impacts was not feasible.

In September 2017, FERC reissued its approval of the pipeline, determining that while it was possible to calculate downstream greenhouse gas emissions, there was no appropriate method to attribute discrete environmental effects to those potential emissions. However, the Court's ruling may still have the effect of encouraging future legal challenges to agency decisions if greenhouse gas emissions and impacts are not appropriately considered, thereby increasing the costs of projects and delaying approvals.

In a somewhat analogous case, the Tenth Circuit Court of Appeals recently ordered the BLM to redo its NEPA environmental impact statements and records of decision for lease extensions on four coal mines in Wyoming, concluding that the agency failed to appropriately consider how granting the leases would impact coal consumption in the U.S., and hence, the release of greenhouse gases from coal-fired power plants. The Court stated that the agency was required to reconsider these impacts and adequately support its conclusions that extending the leases would not have an effect on the U.S.'s total coal consumption, and the associated carbon emissions' effect on climate change.

In addition to the Courts of Appeals, at least one federal district court issued a decision in 2017 that likewise ordered an agency to take into account climate change before granting a permit. A district judge in Montana required the U.S. Office of Surface Mining and Enforcement to revisit its approval of a coal mine expansion, finding that the agency had failed to appropriately consider the project's indirect and long-term effects on greenhouse gas emissions. While the agency had calculated the amount of additional greenhouse gas emissions that would result from the project, the agency had not taken the additional step of analysing the impact of those emissions on the environment.

Climate change litigation

After several failed attempts by environmental groups to hold the energy industry directly accountable for climate change issues in court, a new strategy has emerged in which these groups are suing the federal government to force a change in policy to curb greenhouse gas emissions. In *Juliana v. United States*, a case currently pending in federal district court in Oregon, a group of 21 young people is suing the federal government for violating their constitutional right to a stable climate. In late 2016, the district court issued a remarkable ruling in which it recognised that a climate system “capable of sustaining human life” is a fundamental constitutional right. The Ninth Circuit Court of Appeals has temporarily stayed the action pending its consideration of the government's petition.

Despite past failures, there remain groups that continue to file claims against energy companies, claiming their operations have a causal connection with climate change and sea level rise. The severe weather events in 2017 (see below) have increased the interest of these groups in filing lawsuits pursuing climate-related claims. Many recent claims have been pursued under the Clean Water Act, including one filed in the wake of Hurricane Harvey alleging that Shell failed to address potential future impacts from climate change in its stormwater pollution prevention plan (SWPPP). The plaintiffs have alleged that Shell's facility has the potential to release toxic chemicals into the Providence River in the event of a natural disaster, and its SWPPP does not account for this potential. The same group has filed a similar claim against ExxonMobil in federal district court in Massachusetts.

In addition to claims under the Clean Water Act, environmental groups in 2017 continued to file lawsuits against energy companies based on tort law theories like nuisance and negligence, claiming these companies have knowingly contributed to climate change and sea level rise. While many similar lawsuits have resulted in dismissals by courts in the last several years, including claims made in the wake of Hurricane Katrina, plaintiffs continue to file these types of tort-based lawsuits looking for a different result.

On a state enforcement level, attorneys general from New York and Massachusetts continued pursuing their investigations into ExxonMobil's internal documents and public statements regarding climate change. In 2016, Exxon sued the states of Massachusetts and New York seeking to halt the state investigations. The case is potentially significant to the energy industry as it tests the ability of states to use state laws to target producing companies for their actions relating to climate change policy and laws.

Local governments have also recently brought climate change litigation against major energy companies. In July and September 2017, a number of cities and counties in California filed lawsuits against energy companies, arguing that the companies put the future and health of the communities in jeopardy despite the companies' long-standing knowledge of the impact of greenhouse gas emissions.

Major events or developments

Natural disasters of 2017

2017 was an extraordinarily active hurricane season in the Gulf of Mexico and Atlantic, with the landfall of multiple major hurricanes, disrupting important oil refining and nuclear power generating regions. The first of the hurricanes, Harvey, struck Texas near Corpus Christi before moving east to Houston and Beaumont, where it stalled and produced a catastrophic amount of rain for several days. The Gulf Coast between Corpus Christi, Texas, and Lake Charles, Louisiana, is home to about a third of U.S. refining capacity. In advance of the storm, 15 refineries were shut down, including the two largest refineries in the U.S. Following the storm, several refineries reported damage and may take some time before becoming fully operational again. The storm also shut down offshore platforms in the Gulf of Mexico, and closed ports all along the Texas coast, proving to be a major disruption for the industry.

Following closely on the heels of Hurricane Harvey was Hurricane Irma in the Atlantic, which made landfall in the continental U.S. in Key West, Florida, before moving north through the length of Florida and up through Georgia. Florida is home to two operating nuclear power plants, both of which were taken offline as the storm approached. Puerto Rico also incurred significant damage when Hurricane Maria struck the island and caused a massive interruption of power and gasoline shortages.

Cybersecurity

Natural disasters are not the only concerns facing the energy industry. More than 80% of the U.S.'s energy infrastructure is owned by the private sector, leading the federal government to warn companies responsible for various parts of the energy grid of the need to improve security and preparedness against cyberattacks. The U.S. Department of Energy's (DOE) second instalment of the Quadrennial Energy Review (QER) was released in early 2017, and in it the agency warned that cyberattacks are rapidly evolving and threaten the reliability and security of the entire energy sector due to the interdependence of the industry with the electrical grid. However, the agency also found that the electricity industry in particular had critical vulnerabilities when it came to cybersecurity. One of the key challenges in improving the grid's security is that any operational changes identified must be implemented by thousands of private companies that own and operate the electricity infrastructure.

Proposals for changes in laws or regulations

Energy regulatory overhaul

As discussed above, President Trump signed a March 2017 Executive Order on Promoting Energy Independence and Economic Growth, a cornerstone of which was to modify regulations on the energy sector with the goal of promoting domestic energy development. In the Order, the President directed agencies to review existing regulations that potentially burden the development or use of domestic energy resources, and "appropriately" suspend, revise, or rescind those that are unduly burdensome. In the wake of the Order, numerous agencies have published notice of proposed changes or rescission of regulations, and have sought public comment as part of the required administrative process. Many of these proposed changes are still working their way through the process, so the ultimate outcomes are presently unclear.

The administration has also sought to undo some of the Obama administration's energy policy and regulations by issuing orders to suspend or delay implementation. A primary

example is what is known as the “methane rule”, which was a set of rules intended to limit the release of methane emissions from wells on federal and tribal lands. In June 2017, the EPA announced that it was suspending enforcement of the rule for two years. However, in July 2017, the D.C. Circuit Court of Appeals ruled that the agency could not use this manoeuvre to essentially revoke a regulation. Rather, the Court said the administration must undertake a new rule-making process if it wanted to reverse the methane regulations. As a result, the rule is now in effect and producers must comply with its provisions.

Department of Energy study

In April 2017, Energy Secretary Rick Perry commissioned the DOE to make a study of the challenges being experienced by baseload coal and nuclear plants. Though framed as an inquiry to ensure resilience of the electricity grid, the commission was seen by many as an opportunity to articulate externality costs imposed on the system by clean energy sources. But when the report came out in August 2017, it stated that stagnant growth in electricity demand was a large force pushing coal and nuclear power plants offline, and found that natural gas has been a key factor in pushing nuclear and coal power plants towards retirement.

While not central to the findings, the study did address the rise of renewables and government regulations as factors contributing to the early retirement of baseload plants. The study cited federal regulations like the Mercury and Air Toxics Standards and, if fully implemented, the CPP, as placing pressure on coal-fired generation. Further, the report concluded that variable renewable energy has negatively impacted the economics of baseload plants, including as a result of state-level renewable procurement standards and federal tax credits.

As a result of the study, the DOE issued a proposed rule in September 2017 which directed FERC to establish rules and rates for wholesale electricity sales, ensuring that baseload coal and nuclear generation resources “are fully valued”. The proposed regulations would require significant changes to the way that the wholesale electricity market is regulated and priced. While the proposal faces opposition from supporters of both natural gas and renewable power sources, it is a further indication that the Trump administration is focused on implementing policies supportive of traditional energy resources.

* * *

These observations are made as of October 2017 and are subject to developments in a remarkably volatile political environment. The complex relationship among branches of the federal government, the inherent checks on large-scale changes in administrative agency practices, and the vocal roles of states, localities, and diverse private actors, all combine to make it difficult to articulate a common or coherent energy and environmental policy in the U.S. We expect little in the way of 2018 legislative action by comparison, as the political process wends its way toward mid-term Congressional elections.

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