



IEEFA Response to the U.S. Chamber of Commerce Analysis of the “Keep it in the Ground” Movement

Blames Failing Fossil Fuel Projects on Regulations and Public Engagement, Ignores Underlying Financial Flaws

The U.S. Chamber of Commerce has issued a facts-on-fire report¹ entitled *Infrastructure Lost: Why America Cannot Afford to ‘Keep it in the Ground.’* The report amounts to a complaint that opposition to fossil fuel projects by the environmental movement, and in particular by the *Keep it in the Ground* (KIITG) movement, has cost the economy to lose GDP, jobs and taxes. As evidence, the complaint cites 15 examples of organized opposition to ports, pipelines and power plants, and also examines the New York State fracking ban. The report calls for streamlining the environmental regulatory oversight process to curb what it sees as an abuse of those laws and rules.

The report asserts that delay or cancellation of projects was caused by campaign activities that were independent of and separate from any financial considerations:

The fundamental aim of KIITG represents a sharp departure from decades of environmental advocacy and policy that sought to ensure the production and use of energy resources was carried out as safely and cleanly as possible. The KIITG movement rejects this longstanding tenet of environmental responsibility in favor of the complete elimination of natural gas, oil, and coal from our diverse energy mix.

Furthermore, it aims to do so through any means necessary, employing a broad range of tactics (public relations, litigation, permitting and regulatory processes, divestment pressure, civil disobedience, and “direct action” campaigns) to block a broad range of projects (leasing, production, transport, use, manufacturing and refining, exports, etc.), regardless of the actual merits of any safety or environmental concerns associated with those projects.²

This loose-on-the-facts approach is designed to spur policy action in Washington to further weaken environmental rules. In response, the Institute for Energy

¹ U.S. Chamber of Commerce. Press Release. “[New analysis demonstrates massive costs of ‘Keep It In the Ground’ anti-energy movement.](#)” December 18, 2018.

² U.S. Chamber of Commerce. Report. “[Infrastructure Lost: Why American cannot afford to ‘Keep it in the Ground.’](#)” December 2018.

Economics and Financial Analysis (IEEFA) uses an energy and financial lens to examine the Chamber’s report and its efforts to affect policy.

IEEFA finds that the Chamber’s analysis fails to grasp the changing nature of political and economic risk for fossil fuel projects in the U.S. It does not recognize how the growth of low-priced renewable energy is influencing energy markets, and lacks a fundamental understanding of how local communities may find it in their best interests to reject industry plans. Finally, we find that even if the Chamber succeeded in its goal of eviscerating environmental protections, it would not be able to overcome the market forces that threaten the profitability of the fossil fuel sector in general, and many fossil fuel projects in particular.

Report Fails to Grasp the Changing Nature of Regulatory and Political Risk

From the outset, the Chamber’s complaint seems quite peculiar because the environmental movement is not the sole proponent of keeping fossil fuels in the ground. In fact, prominent coal analysts and coal industry leaders have, during the past few years, called for the closing of mines. These efforts would take 100 million tons of coal out of operation, in effect, leaving it in the ground.³ Peabody Energy, for example, is giving back thousands of acres it leased from the federal government because it cannot sell coal from the mines on this land.⁴ And almost daily we hear of various oil and gas producers— including, but not limited to OPEC— cutting supply, which will leave oil and gas in in the ground in order to boost prices.⁵

IEEFA’s financial analysis finds the Chamber’s response lacking in depth and factual content.

Current environmental opposition to fossil fuel facilities, driven in large part by climate-change issues, has changed the traditional notion of regulatory risk. Regulators must now consider a broader dialogue, more severe scientific assessments and the existence of new alternatives. Regulators are confronted with projects that cannot be fixed with amendments to permitting provisions when they also have the choice to pursue other energy alternatives.

The Chamber’s explicit assumption is that environmental regulation should be designed *solely* to ensure that projects go forward as safely and cleanly as possible. According to this assumption, regulations should never prohibit a project from proceeding based on findings of fact generated by a regulatory process.

The Chamber accurately assesses the general historical range of regulatory actions. Projects have usually been approved, sometimes with no changes at all and

³TRIBLive.com/Bloomberg News. “Mining company bankruptcies failing to cut into nation’s coal glut.” January 28, 2016.

⁴ S&P Global Market Intelligence. “Falling demand prompts Peabody to cut coal mine lease acreage.” August 30, 2018.

⁵ WSJ.com, Faucon, Benoit and Said, Samantha, “Saudis plan to new export cuts in hopes of lifting oil to \$80 a barrel.” January 7, 2019.

sometimes after deliberation and environmental improvements are added to financial and business plans. Today, there are more frequent high-profile cases where regulatory processes do, in fact, add cost. Some projects are rejected or abandoned by sponsoring corporations as a consequence.

The Chamber's assertion that the negative outcomes are an abuse of the regulatory process misses the point. Regulatory law is designed to set standards that protect the health and safety of the public. Most standards are created by statute, codified in regulation and further defined in case law. Participation by individuals and organizations in administrative proceedings that apply general standards to specific projects helps ensure that projects not in compliance with the law are not approved by regulatory agencies.

The idea that the cases being brought are without merit presumes that elected leaders, government officials charged with protecting public health and safety, and the judiciary all work for a meritless system. Actually, the rules for clean water, air and land, and worker health and safety all are based on real histories. Before the laws were passed, actual threats were identified: people got sick and died, communities were harmed, agricultural land lost, local economic value destroyed, and clean water contaminated. In response, laws were enacted, designed to balance protection of the public interest with private interests and economic activities.

Contrary to the Chamber's claim of extremism at every step in the environmental regulatory process, the opposite seems to be more the rule. Most ideas for new environmental laws are rejected. All promulgated regulations are debated, many are litigated, and most are products of compromise. This is exactly how the American system of government is designed to work. Moreover, every enforcement action or challenge to company behavior is litigated through courts and/or administrative tribunals where all sides have their say.

It is virtually impossible to press a meritless environmental claim through this system of checks and balances. Courts can impose sanctions on litigants who pursue frivolous claims. It is striking that courts almost never impose such sanctions on environmental litigants.

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Because the Chamber has chosen to complain rather than to analyze, it has missed three key dynamics that drive environmental regulation:

First, scientific and technology-based analyses are confounding business models for proposed energy projects more than ever before. Regulatory proceedings produce fact-based findings, and permit conditions are monitored by government agencies based on facts and the application of health and safety standards to those facts. Those government agencies, the affected industry, and environmental and other stakeholders work hard to ensure that regulations are based on a sound reading of up-to-date science and technology. The latest scientific findings often confirm that toxins, carcinogens and many chemical compounds that

are part of, or byproducts of, the extraction, processing or use of fossil fuels are indeed harmful to human life and the environment at increasingly lower concentration levels. These scientific and technology-based conclusions, though inconvenient to many businesses, are, in fact, at the root of the growing number of decisions to delay or cancel projects.

Science and technological advances have produced breakthroughs in the extraction, processing and use of fossil fuels. New sources and types of discharges with new contamination, geological and climate consequences also challenge the scope of existing regulations.

Second, the business community confronts more intensified regulatory risk than it has

in the past because their adversaries have acquired greater skill levels, developed best practices networks, found resources and galvanized public opinion. The oil and gas industry laments this state of affairs. But the public has always— and will always— find a way to press the issue when there is an underlying risk to public health, irrespective of regulatory support. The current regulatory and political climate requires that the fossil fuel industry exercise better, deeper and more responsive diligence— prior to making investment decisions.

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Third, opposition to fossil fuel projects is spurred by a range of legitimate community interests. The Chamber complains about the broad proliferation of organizations that are involved in efforts to check the development of these projects. The report names several major national environmental organizations, such as the National Resources Defense Council, as well as national groups that have active local chapters, such as the Sierra Club and 350.org. And then, in its case studies, the report identifies more than 20 grassroots organizations that are not as well-known as the national environmental organizations.

When grassroots citizen organizations form, they are responding to one or more factors including community needs, difficult economic development choices, cumulative environmental factors, complex histories, demographic shifts, quality of life and local political considerations. These disparate factors, for the most part, carry with them separate goals, strategies, skills, tactics and resources. The groups enter the fray of public discourse and make what change they can. The process of community organizing at the local level to solve problems is older than the nation itself.⁶

When businesses organize and decide to invest capital, it is because they too see a need— a market need for a product or service. They enter the fray and are

⁶ Pauline Maier, *From Resistance to Revolution*, New York: Norton and Company, 1972. See also Tocqueville, Alexis de, *Democracy in America*, G. Dearborn and Company, 1838.

accountable to the public discourse involved with moving their project forward, and that includes regulatory proceedings. Some regulatory schemes assume that an investment decision by a company is a sufficient proxy to “prove” actual need. Some areas of energy regulation act as a check on the business concept of need, for example, with Integrated Resource Plans (IRPs) in the electricity sector and certain types of permit proceedings. Whether the determination of need is part of a regulatory process or not, most business investments must meet some environmental, health and safety standards.

Science, skilled and resourced experts, and community participants from various backgrounds can add extra levels and types of deliberative exercises to a regulatory process. These may increase a company’s typical capital and energy planning process for developing facilities. The extra deliberations can be seen as meddling to business. But for many communities— including those identified in the Chamber report— these choices are crucial to their economic future and quality of life. The standard regulatory processes of public and administrative hearings and testimony serve an important purpose. But there is also a less formal approval process that takes place in every community. This informal process, which can surface both inside and outside the formal administrative processes, is part of a community’s character and makeup and can stop a project.

The Chamber’s failure to grasp the changing nature of the regulatory process is compounded by its failure to understand the nature of political risk that currently exists regarding fossil fuel projects. Typically, in the investment world, political risk is more of an issue in emerging market countries where political assassination, nationalization, violence, kidnapping, terrorism (state-sponsored and other) and political use of criminal justice institutions proliferate. Political risk is generally associated with very weak institutional protections, like the rule of law, in strong authoritarian regimes that lack a history of public dialogue and due process.

Political risk, however, must now be considered in the U.S. and other open societies when evaluating fossil fuel projects. The very nature of this political risk has changed. The democratic and administrative processes can end with a deliberate action by a political body to ban, cancel or formally delay, for an indeterminate time, fossil fuel infrastructure development.

The Chamber has correctly identified New York State’s fracking ban, enacted in 2014, as one aspect of this “new landscape” being faced by fossil fuel proponents. In that case, a whole sector of investment has been denied, based on an all-things-considered judgement by duly elected officials.

Several other examples not cited by the Chamber are also relevant to this discussion. In 2016, the federal government placed a temporary halt to coal leasing on federal lands in order to realign institutional interests in the face of changing economic and environmental circumstances. The City of Oakland is engaged in an ongoing struggle with developers over siting a coal port on the city’s waterfront. Its mayor and city council have voiced various types of political opposition and voted to block it. Outside of the U.S., British Columbia voted to prohibit the construction of

the Trans Mountain pipeline through its provincial lands.⁷

Companies face a new regulatory environment due to a confluence of community and climate factors. The issue faced by the Chamber and proponents of fossil fuel infrastructure is not one of abuse of the system, but rather, a logical series of policy feedback responses to laws and regulations designed to protect the public. The laws and regulations protect people and the environment from harm. When those required to attend to these systems do so without regard for the law's intent, societal changes, or local community opinion, the feedback mechanism responds. This may challenge developers' plans to press forward and may have financial impacts that discourage investment.

Chamber Analysis Ignores that Low-priced Renewable Energy Creates Economic Growth, as Fossil Fuels Struggle for Profitability and Relevance

The Chamber report portrays KIITG as wholly destructive to economic growth and progress. Here the Chamber's report is wrong on the facts. Its analytical case is devoid of context, depth and direction.

Fossil fuel infrastructure investment is in fact challenged by financial market dynamics, many of which are influencing policy decision makers, but which have little to no nexus with environmental matters.

By way of example, the following statements, quoted verbatim from the report, are simply wrong:

- If KIITG were to succeed, energy would become more expensive and less reliable. The prices of nearly all goods and services— which are typically made from, and transported with, carbon-based energy— would also rise.
- Eventually, if KIITG succeeded at its goal of restricting access to natural gas, oil, and coal, we would not be able to produce or power many of the machines or amenities that are the foundation of modern society. Cars, airplanes, hospitals, air conditioning, computers, refrigerators, and nearly all other life-improving and sustaining tools depend overwhelmingly on these fuel sources. To support KIITG is to oppose these everyday conveniences and necessities.

In fact, energy is not becoming less reliable and more expensive because of the loss of coal-fired power plants or the delay and cancellation of other fossil fuel subsidies.

⁷ In this instance a pipeline company, Kinder Morgan, decided to abandon a Canadian project due to public and political opposition. The company and its shareholders were handsomely rewarded by Canada's federal government in a buyout transaction. CBC. "[Kinder Morgan distributes revenue windfall to shareholders, despite pared-back assets.](#)" January 16, 2019.

The Chamber's analysis assumes that curtailing the number, type and size of fossil fuel infrastructure projects is having a deleterious impact on the economic functioning of the economy. IEEFA examines this assumption in detail below.

Contrary to the Chamber's claims, KIITG has not caused power outages or loss of access to basic goods and services.

Nowhere in the Chamber report is there support for its claim that access to basic goods and services would be curtailed by actions of the KIITG movement. It is a faulty assumption that support for KIITG is in any way synonymous with opposing necessities or conveniences that define modern society. In fact, the KIITG movement seeks to protect modern society.

The Chamber's accusation that the loss of these infrastructure projects is having, or will have, a negative impact on the economy is an unsupported assertion, and is not borne out by a brief look at current market factors. Given the Chamber's intense concern one would expect to see major shortages in the production of oil, gas and coal; blockages in its distribution and transport and perhaps even rationing on the consumption side. Instead, energy prices are coming down as more natural gas and renewable energy finds its way into the market. Low energy prices create economic benefits.⁸

- Currently the U.S. has an oversupply of oil, gas and coal. The U.S. is now the world's leading producer of oil and natural gas.
- Over the last five years, retail electricity prices have decreased for the commercial and industrial sectors and risen only slightly for residential users. Overall prices have been flat.⁹
- Wholesale prices of electricity nationwide have dropped since 2014, from \$52.32 MWh to \$34.63 MWh in 2018.¹⁰
- Wholesale natural gas prices have dropped since 2014, from \$4.17million British thermal units (MMBtu) to \$3.07MMBtu in 2018.
- The U.S. coal industry continues to decline. However, with consumption levels at 700 million tons per year, it remains one the of the largest coal markets in the world.
- Coal has declined in market share of the electricity market in the U.S., from 50% to the low 30% range. Diverse energy resources, including natural gas, wind, solar, energy efficiency, geothermal and other sources, have filled the void.

⁸ University of Wyoming. Considine, Timothy. "Powder River Basin Coal: Powering America." December 2013.

⁹ Energy Information Administration (EIA). "Average Price of electricity to ultimate customers: 2007-2017."

¹⁰ EIA. "Historical wholesale market data."

- The Department of Energy (DOE) reports robust levels of employment in the oil, gas, solar, wind and energy efficiency sectors, reflecting current rates of growth. DOE found that only in the coal industry are employment levels declining, and they are doing so slowly.¹¹ Similar studies have reached the same conclusion.¹²

In the oil and gas sector, periods of growth generally track periods of increased oil prices. Employment in the industry, however, is primarily driven by technological shifts and production cycles,¹³ rather than by the regulatory issues outlined by the Chamber. Rising prices and production growth can paradoxically accompany lower employment levels, depending on internal industry drivers and timing of economic and business cycles.

The Chamber report ignores the market decline of the fossil fuel sector.

The report does not acknowledge the macroeconomic issues affecting the fossil fuel sector. This is a significant oversight.

- The components of the fossil fuel industry— the oil, gas and coal sectors— are, each in their own way, failing investments. The oil and gas sector, once a leader of the world economy has, for the second straight year, placed near dead last of all sectors in the S&P 500.
- For the past ten years, the S&P Global Oil Index has gone up 3.5%, while the S&P 500 has gone up 14%.
- For the past ten years, the coal industry has gone up 1.06%¹⁴ and the S&P 500 has gone up 14%.

Report Acknowledges Local and Regional Economic Factors, but Methodology is Flawed

These larger macroeconomic factors weigh heavily on the viability of the specific projects identified by the Chamber. The fossil fuel sector, once a major contributor to the nation's economy, is now both less profitable and a weaker partner for state and local governments than it was in the past. This discussion leads us to ask the following questions:

- Why is it wrong for New York State to ban fracking for environmental reasons when the business model for more fracking is currently unable to produce profits? ¹⁵ It is a paradox and a coincidence that the environmental movement's

¹¹ Department of Energy (DOE). "U.S. Energy and Employment Report." January 2017.

¹² Fortune.com. Korosec, Kirsten. "U.S. solar jobs jumped almost 25% in the past year." February 7, 2017.

¹³ Deloitte Insights. Majumdar, Rumki and Mittal, Anshu. "How the shale revolution is reshaping the US oil and gas labor landscape." September 19, 2018.

¹⁴ VanEck.com "KOL. VanEck Vectors ETF."

¹⁵ WSJ.com. Olson, Bradley and Cook, Lynn. "Wall Street tells frackers to stop counting barrels, start making profits." December 13, 2017.

attempt to restrict supply comes at a time when the markets are over-supplied and low prices are harming the industry's profitability.

- Why is it wrong for opposition to develop against the Millennium Coal Port or any coal port on the West Coast when the demand for U.S. coal in Asia is only a marginal swing player? Why invest in permanent port infrastructure when there is no consistent, stable market? Are communities supposed to build ports that stand vacant for long periods, create erratic tax payments and destabilize local employment patterns? Cloud Peak Energy, one of the largest exporters off the West Coast, has recently said it is considering a sale of its assets, including its coal export assets. Over the last ten years, it has had to cancel its port agreements because of weak demand.
- Why is it wrong for the State of Washington to question new fossil fuel port infrastructure when its total \$77 billion export capacity in 2017 included less than \$1 billion in petroleum products and that amount has declined in recent years?¹⁶
- And why is it wrong for local citizens and businesses to question the intelligence of running pipelines through agricultural lands and scenic natural resources when the industry acknowledges its penchant for overbuilding and has demonstrated a record of spending millions on pipelines that have no market outlet?¹⁷

The Chamber report comes closest to contributing to a dialogue on the issues when it concentrates on state and local economies. Investors and CEOs may live at the macroeconomic level, but citizens live locally. Schools, shops, parks, and hospitals are local. Plant and facility decisions affect residential areas and quality of life— not just the macroeconomy.

IEEFA's agreement with the Chamber, however, does not extend much beyond the insight that towns, villages, cities and hamlets matter.

Our first criticism of the Chamber's treatment of local economies is with their use of the IMPLAN model. The IMPLAN model estimates the specific job, tax and economic benefits of a given project,¹⁸ but it is of little value as a tool for assessing options and choices that are necessary for the all-things-considered decisions that are ultimately

¹⁶ [World's Top Exports \(WTEEx\)](#). Workman, Daniel. "Washington State's top 10 exports." December 22, 2018.

¹⁷ WSJ.com. Elliott, Rebecca. "[In booming oil field, natural gas can be free.](#)" December 27, 2018.

¹⁸ There is real debate over the use of these models as reliable predictors of actual economic behavior. The battle is usually over methods, and not whether actual people were employed or local communities received projected tax revenue. WashingtonPost.com. Matthews, Dylan. "[Did the stimulus work? A review of the nine best studies on the subject.](#)" 8/24/11. When audits have been done of job creation, the results are usually at best inconclusive and at worst fail to meet projected employment levels. New York State Office of the Comptroller. "[Report 2015-S-20. Selected management and operations procedures: New York Power Authority.](#)" August 2016.

made by business¹⁹ and government economic development and political officials. The Chamber report assumes that because a project is estimated to produce new jobs or tax revenues, that therefore a community or administrative body is harming its economy if it turns the project down. However, local economic development choices are actually made based on a complicated set of factors, including, but not limited to, jobs and taxes. Local history, politics, business and demographics all play a part.

The IMPLAN model treats all geographic regions in the same way, assuming that X amount of investment (money in) produces Y number of jobs and Z economic activity (money out), which is seen as the sum total of all economic benefits to be derived from the investment. This model has an important contribution to make as a supplementary resource in any economic planning venture for factories, water, electric and sewer infrastructure, recreational facilities, schools, health, water and transportation infrastructure. But the final decision will only be as good as the scope and clarity of vision for any project or plan under consideration for development.

Secondly, we note that most of the communities identified in the Chamber report have diverse economic bases. They make choices about what kind of development is good for the overall growth of their town, region or state. In almost every state, some sectors of the economy are growing and producing jobs and others are not. Only two of the states identified, West Virginia and Nebraska, are in the lower half of the nation by gross state product (GSP).²⁰ Nebraska is also considered 8th on a list of economic growth areas.²¹

Thirdly, we find that in its haste to advocate for fossil fuel projects, the Chamber has sidestepped the very difficult issue of communities that are wholly dependent on fossil fuel facilities, at a time when the industry is in a state of decline and realignment. For example, large segments of West Virginia that have historically been dependent on and benefited from coal mining are going through tough times. The state as a whole has a growing and increasingly diverse economy, but the local problems in older, mature mining areas require attention. There is no mention of how local economies that may still depend on fossil fuels in a declining period can, nevertheless, find ways to grow.

Case Study: Deep Flaws in Analysis of the Fracking Ban in New York State

An IMPLAN model is not a local analysis of economic conditions. The Chamber report is particularly weak in this area and does not take local economic conditions into account. For example, one-third of the project cancellations identified in the

¹⁹ IMPLAN's own advertising tells the reader to use the model in tandem with corporate data: "Your company's data, combined with IMPLAN, can help you look beyond gross margin and gauge your impact on the local economy." IMPLAN.com.

²⁰ Wikipedia. [List of US states and territories by GDP](#).

²¹ BusinessInsider.com. Kiersz, Andy. "Every state economy ranked from worst to best." March 15, 2018.

report are in New York State. The report singles out New York’s fracking ban as a particularly pernicious policy initiative.

The state of New York is the third largest economy²² in the nation and is often conceived of as two distinct economies. Downstate New York is dominated by Wall Street and international commerce. The upstate economy,²³ (including most of the counties that would have been most directly affected by fracking), has historically been more troubled. It is currently experiencing unemployment rates below 4%,²⁴ but although growth in jobs is clear, the high-wage jobs that were once part of the area’s manufacturing sector have not bounced back from large losses that started in the 1960’s. Solving this challenge has defied public policy solutions by both parties.

The legacy of upstate New York’s manufacturing decline comes with an equally difficult long-term legacy of environmental contamination, which hampers development, especially in the western part of the state. Further, the Southern Tier of the upstate region was once supported by IBM, until the company contracted and left the state, causing economic losses in those counties and in the Hudson Valley. The Hudson Valley today is a fast-growing area with a diverse economy. The Southern Tier, however, has never recovered. The region remains an important area for state economic development initiatives, including the growth of its clean energy economy.²⁵ Against a weak economy in the Southern Tier, where it was most relevant, the fracking ban proved a controversial issue.

Most importantly, the fracking ban protected New York’s water resources. Watershed areas in upstate New York provide clean water to New York City and other major metropolitan areas. Part of the region is covered by federal oversight and monitoring agreements. Local coalitions in the watershed area and public officials from communities that benefit from the water supply all supported the ban.²⁶

Given the intensity of the controversy over the fracking ban, one could have expected Democrat Andrew Cuomo, the governor who initiated the ban in late 2014, to suffer at the polls. However, Cuomo won re-election overwhelmingly in 2018. Southern Tier counties typically vote for Republican gubernatorial candidates, and in 2018, this was no different. Cuomo did a little better in some counties and a little worse in others in the Southern Tier, but the election results revealed no strong negative response to the fracking ban.

New York State’s decision to ban fracking is at the core of the discussion of the Keep It in the Ground Movement: The approval of fracking would undoubtedly have created jobs and additional tax revenue, but, as the following analysis shows, not

²² Wikipedia. [List of US states and territories by GDP](#).

²³ Democrat & Chronicle. [Upstate NY population continues to drop](#). March 22, 2018.

²⁴ New York State Department of Labor. [Unemployment Rates by County, New York State](#). November 2018.

²⁵ NYSERDA. [New York’s Southern Tier: a vibrant clean energy hub in the Northeast](#).

²⁶ Coalition for the Delaware River Watershed. [Delaware River Basin Commission Releases Fracking Regulations](#). December 2017.

nearly as much as advertised. And it would have come at an extraordinary environmental cost.

Fracking's Financial Performance: Weak Jobs and Low Profits

For its calculation of the economic losses associated with New York's fracking ban, the Chamber relies on a 2010 study commissioned by the American Petroleum Institute (API) to forecast the economic impacts of Marcellus Shale development in New York, Pennsylvania and West Virginia. The study predicted in its high development scenario that Marcellus Shale development would produce 1,598 jobs and \$46 million in tax revenue in New York in 2011 and then grow to produce 27,060 jobs and \$776 million in tax revenue in 2020.²⁷

Because New York banned fracking, there are no actual numbers that can now be compared with the API projections. However, the API study is now known to have produced very inflated numbers when compared to the actual economic development that resulted from shale development in West Virginia, a state that did not implement a fracking ban. Natural gas production in West Virginia has outstripped even the high development scenario in the API report.²⁸ Yet from 2008 to 2017, actual direct employment in the natural gas industry in West Virginia increased by 2,640 jobs.²⁹ This is significantly less than the increase of approximately 15,000 new direct jobs predicted by the API study in its high development scenario.³⁰

The poor performance of shale drilling as a driver of new employment opportunities is connected to the low-price environment created by the expansion of shale drilling, a consequence that was not anticipated by the API study. Low prices have forced the industry to become more technologically innovative in order to lower costs. This means that the number of jobs in shale drilling per unit of natural gas extracted has declined dramatically. The number of exploration and production jobs per billion feet of natural gas extracted in West Virginia plummeted from 29 jobs per billion cubic feet (bcf) in 2008 to 9 jobs per bcf in 2014 to 4 jobs per bcf in 2017.³¹

The API study's inflated job numbers spill over into inflated tax revenues, given that for New York, 80% of the projected Marcellus-driven tax revenue was derived from employees and households.³²

In terms of economic development, therefore, the job and tax numbers quoted by the Chamber of Commerce are inflated by roughly a factor of five.

²⁷ Page 34.

²⁸ The API study (p. 34) predicts 2,916 mcf/day of natural gas production in WV in the high scenario. Actual shale production in 2017 was 4,071 mcf/day.
https://www.eia.gov/dnav/ng/hist/res_epg0_r5302_svw_bcfa.htm

²⁹ Source: Workforce WV.

³⁰ Assuming the same multiplier between direct and total jobs that the API study calculated for 2009.

³¹ Jobs in NAICS sectors 211 ("oil and gas extraction"), 213111 ("drilling oil and gas wells") and 213112 ("support activities for oil and gas operations") were divided by West Virginia total dry gas production. Employment data from Workforce WV, dry gas production data from U.S. Energy Information Administration.

³² Page 30.

Beyond this glaring error, created by relying on early studies that promoted the industry without a retrospective look at the actual performance in states where development occurred, the Chamber of Commerce study strongly implies that fracking would have been a profitable venture in New York had it been allowed to occur. This is far from the case.

Because shale drilling is so capital intensive, shale gas drilling companies have never been able to finance their capital expenditures out of cash from operations. In other words, they are constantly relying on the debt and equity capital markets to finance new drilling. While one would expect a new industry to require significant start-up capital, as the industry matures, investors expect that it should become financially self-sustaining, generating enough revenue to cover new investments. From 2010 to 2018, a survey of 33 independent U.S. oil and gas drillers found that they had collectively spent \$196 billion more on capital expenditures than they earned by selling oil and gas. Since the beginning of 2015, 144 North American oil and gas producers have filed for bankruptcy.³³

Financially, therefore, the shale boom has been a bust. If New York had not had a fracking ban in place, the oversupplied market would have been flooded with even more cheap gas, driving natural gas prices lower, resulting in more financial troubles for drillers and more bankruptcies. Contrary to the message of the Chamber of Commerce, New York's fracking ban has likely saved investors hundreds of millions of dollars.

Conclusion: The Chamber's Recommendations for Federal Action Will Hurt the Environment and Will Not Improve Industry Profits

The Chamber report recommends various executive, administrative and legislative actions to weaken the National Environmental Policy Act (NEPA) process and to shorten the timing and review processes of projects. This will have one effect: to harm the environment.

Weakening environmental regulation will not produce even a marginal financial benefit for the coal industry. It will neither turn around losses nor incentivize new investment. Likewise, the oil and gas sector will not be well served by the Chamber's recommendations. The Chamber would be wise to note that this sector was the last-in-class performer in the S&P 500 last year, and has lagged the market for a better part of the decade. Eviscerating the environment will not turn this financial tailspin around.

³³ Haynes and Boone, LLP. "Oil patch bankruptcy monitor." March 31, 2018.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Authors

Tom Sanzillo

Tom Sanzillo, director of finance for IEEFA, is the author of several studies on coal plants, rate impacts, credit analyses and public and private financial structures for the coal industry. He has testified as an expert witness, taught energy-industry finance training sessions, and is quoted frequently by the media. Sanzillo has 17 years of experience with the City and the State of New York in various senior financial and policy management positions. He is a former first deputy comptroller for the State of New York, where he oversaw the finances of 1,300 units of local government, the annual management of 44,000 government contracts, and where he had oversight of over \$200 billion in state and local municipal bond programs and a \$156 billion pension fund.

Kathy Hipple

Kathy Hipple, a financial analyst at IEEFA, teaches the finance sequence at Bard's MBA in Sustainability program and is the founding partner of Noosphere Marketing. Hipple has written extensively about sustainable, responsible and impact finance and investing. As Vice President at Merrill Lynch for 10 years, she placed fixed income securities with international institutional clients, and advised international life insurance companies and pension funds. She later founded Ambassador Media, a local search firm in New York City, and served as its CEO. She has served on several boards, including the national Local Search Association and Bennington County's Meals on Wheels.

Cathy Kunkel

Cathy Kunkel, energy analyst, is an independent West Virginia-based consultant focusing on energy efficiency and utility regulation. She has testified on multiple occasions before the West Virginia Public Service Commission for the nonprofit coalition Energy Efficient West Virginia. She has done graduate work for the Energy and Resources Group at the University of California-Berkeley and is a former senior research associate at Lawrence Berkeley National Laboratory. Kunkel has an undergraduate degree in physics from Princeton University and a graduate degree in physics from Cambridge University.

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