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STATES
SENATE

SOLYNDRA SYNDROME

& THE GREEN STIMULUS DELUSION

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EXECUTIVE SUMMARY

As a candidate, President Biden promised his "Build Back Better Recovery Plan" would create 10 million jobs - including millions in the resilient infrastructure and clean energy fields. These bold words echo promises made by President Obama and then-Vice President Biden in response to the "Great Recession," in 2009. The partisan American Recovery and Reinvestment Act included $90 billion for green jobs and billions more for the failed-Cash for Clunkers program. After funds were distributed, companies like Solyndra, A123 Systems, Beacon Power, and others went belly up and billions of taxpayer dollars were wasted.

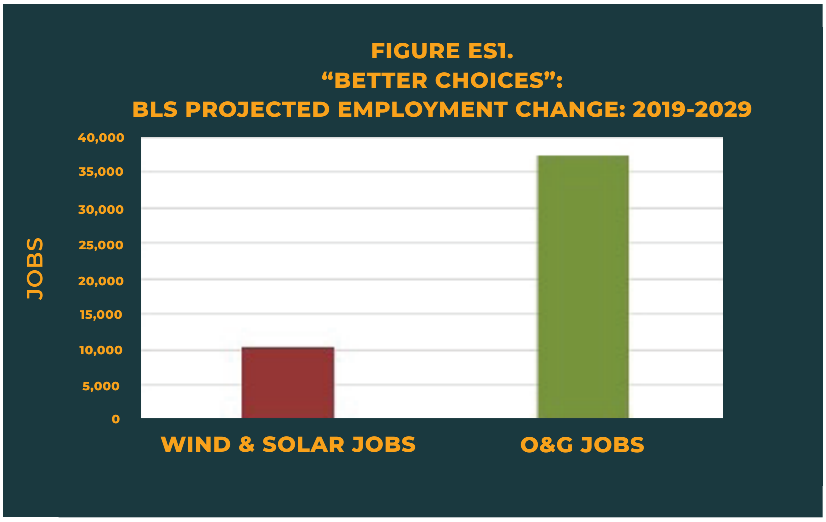
During the tepid recovery from the 2009 "Great Recession," the oil and gas sector was the one bright spot, creating jobs at a rapid pace. By the end of 2013, non-farm employment was an anemic 1.9 percent above where it was at the end of 2009. Comparatively, oil and gas employment was nearly 16 percent higher. This strong output and robust job growth led to the United States becoming the globe's leading producer of oil and gas, making America more energy secure.

Instead of embracing what works—and what actually puts people to work—the president is set on making the same mistake as the Obama-Biden administration. The administration is even going as far as reviving the Cash for Clunkers program. The president's push for green energy comes at the same time that his policies intentionally are killing American jobs in the traditional energy sector. The president's executive order to revoke the permit for the Keystone XL pipeline ended the prospect of 11,000 American jobs, in 2021 alone. His moratorium on oil and gas production on public lands has the potential to kill a million jobs and jeopardize the nearly $10 billion in annual revenue generated on federal lands in FY 2019. Western states, like New Mexico and Wyoming, which depend on this revenue to help fund essential services like schools could see disbursements from oil and gas production on federal lands evaporate. About $1.1 billion and $430 million, respectively, will be put at risk under a ban.

DOUBLING DOWN ON FAILURE

	OBAMA-BIDEN	BIDEN-HARRIS
WASTEFUL & INEFFECTIVE "GREEN" JOBS TRAINING	✓	✓
COSTLY CASH FOR CLUNKERS	✓	✓
BUDGET-BUSTING HIGH-SPEED RAIL	✓	✓
FINANCE FOR POLITICALLY-CONNECTED GREEN COMPANIES	✓	✓
BASH OIL & GAS	✓	✓

The president's climate czar, John Kerry, assures us ". . . the choice of doing the solar power one now is a better choice. And similarly, you have the second-fastest-growing job pre-COVID was wind turbine technician." By 2029, however, the Bureau of Labor Statistics (BLS) expects solar and wind turbine technician positions to grow by a combined 10,400 new jobs. These pale in comparison to the 37,400 new oil and gas jobs BLS expects over the same time span (Figure ES1).



President Biden's policies are a return to the Solyndra Syndrome of 2009, when rosy promises were made and billions of taxpayer dollars were wasted.

Introduction—We've Heard that Song Before

The COVID-19 pandemic has wreaked havoc across America. The cost in lives and livelihoods has been terrible. The effects have been felt all across the economy.

Now, more than a full year into the COVID-19 pandemic, vaccinations are underway and our economy is on the mend. Millions of people, however, are still out of work, many schools remain shuttered, and stores and restaurants are barely surviving, if they have not closed completely. Getting the economy back humming again should be our priority. That means we should be focusing on what has proved to work and not what doesn't work.

Energy will be a big part of that. Unfortunately, President Biden and his administration seemed determined to repeat the same mistakes the Obama administration made when dealing with the recovery from the 2009 financial crisis.

As a candidate, we were warned that "Biden believes the Green New Deal is a crucial framework for meeting the climate challenges we face." As president, Mr. Biden is following through on this belief, both through far-reaching executive orders and legislative proposals.

President Biden has made the Green New Deal one of the central elements of his plan to get people back to work quickly. "A key plank of our Build Back Better Recovery Plan," the president said, "is building a modern, resilient climate infrastructure and clean energy future that will create millions of good-paying union jobs." His campaign website promised his plan would create 10 million jobs.

If that sounds familiar, it's because then-Vice President Biden and President Obama were saying similar things about their recovery plan from the 2009 "Great Recession."

During his 2008 presidential campaign, then-Senator Obama memorably said his stimulus plan would "create 5 million green jobs." As president in February 2009, he signed into law a partisan $787 billion "stimulus" spending spree, the American Recovery and Reinvestment Act (ARRA).

This bill included billions for things like insulating and weather-proofing homes, energy efficiency, public transportation, smart grid, advanced batteries, green jobs training, and financial support for politically-connected green energy companies like Solyndra, now a byword for failure. Congress also pitched in another $3 billion for the "Cash for Clunkers" car trade-in program.

But did all of this spending give the economy the immediate shot in the arm it needed and stimulate the green jobs they promised? Hardly. Instead, we got a predictable and well-documented string of policy failures that cost taxpayers a bundle.

At the same time, the oil and gas sector was thriving, producing energy at a furious pace, and helping make America the world's largest energy producer. From the employment low point in February 2010 to the end of 2013, non-farm employment grew at a sluggish 1.4 percent per year, while oil and gas employment grew at a brisk pace of 5.4 percent per year.

The headlines in Table 1 outline the remarkable contrast.

TABLE 1. ECONOMIC STIMULUS & RECOVERY FROM THE 2009 FINANCIAL CRISIS

2021 GREEN FAILURES	OIL & GAS SUCCESSES
"Number of Green Jobs Fails to Live Up to Promises," The New York Times, August 18, 2011	"The Explosion of Oil and Gas Extraction Jobs," New Geography, June 13, 2011
"The 5 Million Green Jobs that Weren't," Bloomberg Business Week, October 11, 2012	"America's Fossil-Fuels Jobs Boom," The New York Times, March 12, 2012
"Almost anything would have been a better stimulus than 'Cash for Clunkers,'" The Washington Post, October 31, 2013	"Oil and Gas Boom Lifts U.S. Economy," The Wall Street Journal, February 8, 2012
"Solyndra: Politics infused Obama energy programs" The Washington Post, December 25, 2011	"Breaking New Ground: Oil Boom Draws More Women to Industry," ABC News, May 20, 2012
"Chinese company buys battery maker that got recovery funds," The Washington Post, December 9, 2012	"Oil and gas industry employment growing much faster than total private sector employment," Today in Energy, Energy Information Administration, August 8, 2013

This catalogue of green stimulus mishaps did nothing to help the United States recover from the financial crisis and precious little to create jobs. Indeed, as documented below—and as the news story headlines in Table 1 show—green jobs training, Cash for Clunkers, and green financing were all expensive flops that frittered away taxpayer money on green boondoggles big and small. It seems the only people who made out were the politically connected.

If anyone should have learned the lessons of this, it should have been President Biden. As Vice President, he was the official whom President Obama put in charge of implementing the 2009 stimulus package.

Despite his experience with the 2009 recovery, President Biden is showing a dogged determination to double down on a failed green stimulus policy. They offered 5 million jobs then, he's promising 10 million jobs now. Double the promise, so double the damage. He's even proposing a new and improved Cash for Clunkers program.

In the meantime, the administration is killing jobs in a sector poised to make a comeback—oil and gas. In two executive orders issued his first week in office, the president implemented a lite Green New Deal, killed the Keystone XL pipeline and the estimated 11,000 jobs that go with it, and imposed a ban on new oil and gas leases on federal land—a breathtaking abuse of executive authority.

The current state of play is captured in Table 2.

TABLE 2. ECONOMIC STIMULUS & RECOVERY FROM THE COVID PANDEMIC

2021 GREEN JOB PROMISES	2021 OIL & GAS JOB REALITIES
"Climate: 10 Million Clean Energy Jobs," Biden-Harris Campaign, 2020	"Joe Biden's attack on fossil fuel goes faster, further than anyone expected," Bloomberg News, January 28, 2021
"Biden's Next Covid Stimulus Pitch: A $2 Trillion Green Energy Jobs Plan," Forbes, July 14, 2020	"Biden's climate agenda: Is this the beginning of the end for fossil fuels?," BBC, January 31, 2021
"Biden says tackling climate change will create jobs, bring economic recovery" ABC News, January 27, 2021	"Biden Policies already hurting oil and gas industry," Fox News, January 29, 2021
"Biden's climate executive orders are a mini-Green New Deal" Yale Climate Connections, February 3, 2021	"Biden May Kill A Quarter Of U.S. Oil And Gas Production," Forbes, January 27, 2021
"Biden's climate plan is all about jobs and justice," The Washington Post, January 27, 2021	"Top union leader: Biden's Keystone plan wrong, will cost U.S. jobs," Axios, February 7, 2021

President Biden is repeating the same promises he's made before, but this time, he's also attacking an oil and gas industry that can help lead the country's recovery.

Killing existing jobs is not a good economic recovery strategy, but that is exactly what the Biden administration has been doing.

As we'll see below, by any measure, the 2009 green stimulus, in all its guises, was an expensive flop. If experience is any guide, the Biden administration's 2021 green stimulus is almost sure to be a flop, too—and a more expensive one.

"Green Jobs" Training—Few Jobs, Lots of Green

Let's start with the Obama administration's experience with green training. The Department of Labor Inspector General (IG) released two reports assessing the progress of $500 million devoted to green training programs. The first in September 2011, well into the recovery, found that job placement was at only about 10 percent of the desired level, with very low (2 percent) retention rates. Moreover, it found that "ETA [Employment and Training Administration] and grantees have reported achieving limited performance targets for serving and placing workers," concluding that, "with 61 percent of the training grant periods elapsed and only 10 percent of participants entered employment, there is no evidence that grantees will effectively use the funds and deliver targeted employment outcomes by the end of the grant periods."

A follow-up report issued in 2013, more than three years after ARRA was enacted, also uncovered a low retention rate (16 percent) and the fact that half of those who completed training "were incumbent workers, meaning the participants were already employed when they entered the program."

As a result, the IG noted, "Grantees were authorized to train incumbent workers who needed training to secure full-time employment, advance their careers, or retain their current jobs. However, for the 81 incumbent workers we identified in our sample, we found no evidence that they needed green job training for any of these purposes." It is hard to argue that as a short-term jobs program, this was effective in any meaningful way.

The Labor Department IG wasn't alone in finding a lot of money being spent with little effect. In an October 2012 article, "The 5 Million Green Jobs That Weren't," Bloomberg Business Week examined the numbers, "Digging into the public records of the $21 billion spent so far through 19 U.S. Department of Energy programs reveals 3,960 projects that employ 28,854 people." That amounts to about $725,000 per job.

"Cash for Clunkers" Collides with Reality

The Cash for Clunkers program didn't fare any better than the green jobs training program. Congress set aside almost $3 billion in vouchers for the program, which began in July 2009. The program provided people a credit of up to $4,500 to trade in vehicles getting less than 18 miles per gallon to buy a new vehicle with a fuel economy rating at least 25 percent better than the CAFE benchmark for that vehicle class. "Go out and buy a car," was the pitch President Obama's Transportation Secretary Ray LaHood made to wary consumers.

Buy they did, and in July and August 2009 car sales jumped. Before long, $2.85 billion of the $3 billion Congress budgeted was spent. But did this program stimulate the economy and lead to greater employment, or did it merely—as many skeptics claimed—"fast forward" by a few months purchases that would have occurred anyway? It turns out it was the latter.

An early assessment of the program by the National Bureau of Economic Research found that it did increase the purchase of new cars, "However, almost all of the additional purchases under the program were pulled forward from the very near future; the effect of the program on auto purchases is almost completely reversed by as early as March 2010—only seven months after the program ended. . . We also find no evidence of an effect on employment . . . in cities with higher exposure to the program."

A 2011 Staff Report from the Federal Reserve Bank of New York concluded much the same, saying: "Sales clearly rose at the outset, but given that the industry can simply let inventory stocks absorb the increase in sales, higher sales alone do not imply higher GDP or employment. Overall, we find that the program had a very modest and short-lived effect on production."

The Government Accountability Office piled on, finding that: "While some of the increase in vehicle sales in July and August 2009 is attributable to the CARS program, a portion of the sales would have likely occurred even if the program had not been implemented." Researchers from Cornell and Resources for the Future also noted "approximately 45 percent of the spending went to consumers who would have purchased a new vehicle anyway."

Just how poorly this program performed was brought home in an Economic Studies at Brookings report that estimated Cash for Clunkers "created 0.7 jobs for each million dollars of program cost, resulting in a cost of $1.4 million per job created." As a stimulus, it really doesn't get much worse than that. A Washington Post headline over an article summarizing this Brookings report says it all, "Almost anything would have been better stimulus than 'Cash for Clunkers'".

It turns out Cash for Clunkers was a real lemon.

California's Bullet Train goes Off the Rails

The wasted billions didn't end with cars. California's bullet train was yet another failed boondoggle. It, too, was an Obama administration stimulus initiative. The Federal Railroad Administration provided about $3.5 billion in federal stimulus money and a railroad improvement grant to the California High-Speed Rail Authority in 2010 and 2011.

Ray LaHood, the Obama Administration's Secretary of Transportation, climbed aboard with enthusiasm, saying, "I'm not a historian, but I know this: One of the legacies for this administration, for the president and the vice president, will be high-speed rail. That will be their transportation legacy." It hasn't turned out that way, but not from lack of money.

It was always a risk this project would run off the tracks. The original plan was to connect San Francisco and Los Angeles by way of California's Central Valley. Then-California Gov. Jerry Brown had this reply to the projects' naysayers, "We can do it if we have the imagination, if we have the will, and we don't let these small-minded people intimidate us into lowering our expectations." The original budget was $35 billion, most of which would have come from California taxpayers.

Fast forward to 2019 when, faced with runway project costs, California Governor Gavin Newsom finally threw in the towel and announced he was derailing the original project except for the Merced to Bakersfield leg, which lets California avoid paying $3.5 billion back to the federal government.

After wasting billions of federal and state resources, the project that was going to carry passengers between the San Francisco (population 4.7 million) and Los Angeles (pop. 13.2 million) metropolitan areas will carry passengers between the Merced (pop. 280 thousand) to Bakersfield (pop. 900 thousand) metro areas. A more wasteful use of billions of federal funds is difficult to imagine.

This California experience hasn't dimmed the Biden administration's ardor for high-speed rail. About $20 billion from the Biden "infrastructure" spending spree is for intercity passenger rail, which could include California's bullet train. Transportation Secretary Pete Buttigieg recently said they offered further federal support for these kinds of projects. "I want the U.S. to be leading the world when it comes to access to high-speed rail." We are certainly leading the world when it comes to wasting taxpayer money on high-speed rail failures.

Green Gambles Gone Bad

The Obama-Biden administration also embarked on a scheme to back commercial enterprises through loan guarantees and other financial instruments authorized by ARRA that led to some spectacular failures that occurred amidst charges of political favoritism.

The most infamous of these is Solyndra, a manufacturer of solar panels that received nearly all of its allotted $535 million Department of Energy (DOE) loan and filed for bankruptcy in September 2011. The Solyndra debacle tarnished the entire Obama administration clean energy loan program.

The Washington Post reported that, "Meant to create jobs and cut reliance on foreign oil, Obama's green-technology program was infused with politics at every level, The Washington Post found in an analysis of thousands of memos, company records and internal e-mails. Political considerations were raised repeatedly by company investors, Energy Department bureaucrats and White House officials."

More than a thousand workers lost their jobs. More concerned with the political optics of the coming failure, the Post reports, "Rarely, if ever, was there discussion of the impact that Solyndra's collapse would have on laid–off workers or on the development of clean energy technology."

But the Solyndra syndrome began to spread, and soon other companies went belly-up. A thin-film solar manufacturer, Abound Solar, that received a DOE loan guarantee for $400 million called it quits in June 2011 after laying off 70 percent of its workforce four months before. Another solar company, First Solar, received $3 billion from DOE's loan guarantee program garnering over $3 billion, which it eventually sold to third parties and then let go 30 percent of its workforce.

Other examples include:

- Beacon Power, a flywheel storage company which received $43 million in stimulus loan guarantee, declared bankruptcy in October 2011 after it was unable to earn sufficient revenue to meet the terms of the loan.
- Ener1 received a $118.5 million grant to build a battery manufacturing plant. The company was eventually bought by a Russian investor after the company declared bankruptcy in January 2011.
- A123 Systems, a battery manufacturer, which accessed $132 million of a $249 million stimulus grant from DOE in loan guarantees to refurbish two Michigan plants plus other projects before it, declared bankruptcy. In a further insult to U.S. taxpayers, the company and its intellectual property was purchased in 2012 by Wanxiang Group, a large Chinese auto parts maker.
- Fisker Automotive, a Finnish electric car manufacturer, which drew down $200 million of a $529 million loan to design a mid-priced electric vehicle and build a factory had its funding froze by DOE in May 2011. A123 supplied Fisker the batteries it used, and it was soon after A123 went broke that Fisker did too (in 2013). Fisker's assets eventually were gobbled up by China's Wanxiang Group, purchaser of A123, for $149.2 million in February 2014.

The most recent failure occurred last year when Tonopah Solar Energy LLC, the owner of a solar-thermal generating plant that received $737 million in DOE loans, filed for bankruptcy in July 2020. The troubled plant never generated anywhere near its capacity and its technology proved unreliable and costly. At the time of bankruptcy, the company still owed $425 million on its loan, about $200 million of which DOE will get under a settlement.

Oil and Gas Sector Showed the Way Before

While the Obama-Biden administration's expensive green jobs stimulus did little to boost the economy or help people quickly find jobs of any hue, America's oil and gas sector was expanding briskly. One of the paradoxes of the Obama-Biden administration is that an energy revolution was taking place under its very nose and providing the kinds of stimulus the economy really needed. Instead of embracing this, the Obama-Biden administration kept it at arm's length, and the regulatory onslaught it unleashed created severe economic headwinds that did nothing to help the recovery.

Although a strong V-shaped recovery is what one would expect from such a deep recession, the Obama-Biden recovery was more L-shaped, and lackluster growth was something we were told to accept as the "new normal." It's because of this poorly performing economy that the number of people employed rebounded only haltingly during the Obama-Biden recovery.

The one bright spot in all of this was the oil and gas sector, where employment soared. In 2009, the application of hydraulic fracturing, horizontal drilling, and advanced seismic imaging to shale formations was beginning to unleash gushers of natural gas and, later, crude oil. Most of this development occurred on private and state lands and away from meddling federal regulators. The result was an employment boom.

The chart in Figure 1 shows the change in employment over the critical couple of years after 2009, when the economy was really in need of a boost. From the employment low point in February 2010 to the end of 2013, non-farm employment grew at a sluggish 1.4 percent per year while oil and gas employment grew at a brisk pace of 5.4 percent per year.

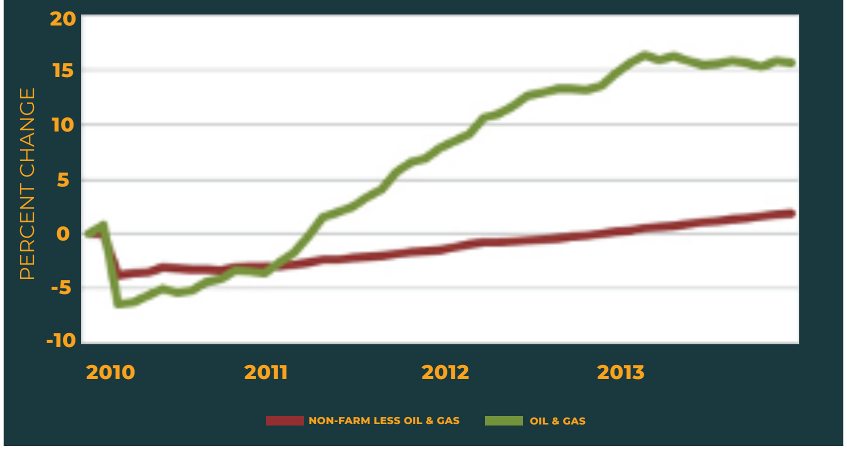
By the end of 2013, non-farm employment was an anemic 1.9 percent above its level at the end of 2009, whereas oil and gas employment was nearly 16 percent higher. Now that is a jobs recovery.

The Energy Information Administration also found oil and gas sector jobs growing at a faster pace than other jobs categories and said, "Both the support and drilling industries were heavily affected by the recession, but these industries have recovered quickly."

And it's not only jobs. The increased oil and gas output from shale formations opened opportunities for new workers that were engaged and provided an economic fillip by keeping energy prices lower than they would have been otherwise.

One need just compare, for example, the Energy Information Administration's (EIA) Updated Annual Energy Outlook (AEO) 2009 "Reference Case Reflecting Provisions of the American Recovery and Reinvestment Act and Recent Changes in the Economic Outlook" forecast of natural gas prices with actual gas prices over the few years immediately following enactment of ARRA. In 2010—just one year after EIA's revised forecast—natural gas prices were 4.6 percent lower for residential customers, 6.2 percent lower for commercial customers, and 6.4 percent lower for industrial customers than EIA estimated. By 2013, the first year of President Obama's second term, actual natural gas prices in those sectors were, respectively, 18 percent, 25 percent, and 30 percent lower than in the 2009 forecast.

FIGURE 1. TRENDS IN EMPLOYMENT FROM THE END OF 2009 TO THE END OF 2013: OIL & GAS VS. NON-FARM



Not only was the oil and gas industry providing needed jobs, it was giving the economy a stimulating tonic it sorely needed: cheaper energy. The benefits of low cost energy are especially helpful for low income and fixed income households, which tend to spend a greater share of their disposable income on energy.

Since then, of course, the United States has gone on to become the world's number one producer of crude oil and natural gas. In recent testimony before the Senate Energy and Natural Resources Committee, Dr. Fatih Birol, the head of the International Energy Agency (IEA), was asked whether this development was a good thing for the security of international energy markets. His unambiguous reply was, "Definitely, yes."

The energy revolution also has conferred on the United States a terrific longer-term competitive advantage. Figures 2 and 3 show industrial price data gathered by IEA for electricity and natural gas in Organization for Economic Co-operation and Development countries. Using a mix of affordable coal, nuclear, and fracked natural gas has kept electricity prices and gas prices comparatively low relative to our economic peers, many of whom have a much greater mix of more expensive renewables. Maintaining America's energy edge should be a priority for this or any other administration.

FIGURE 2. ELECTRICTY PRICES FOR INDUSTRY: 2019

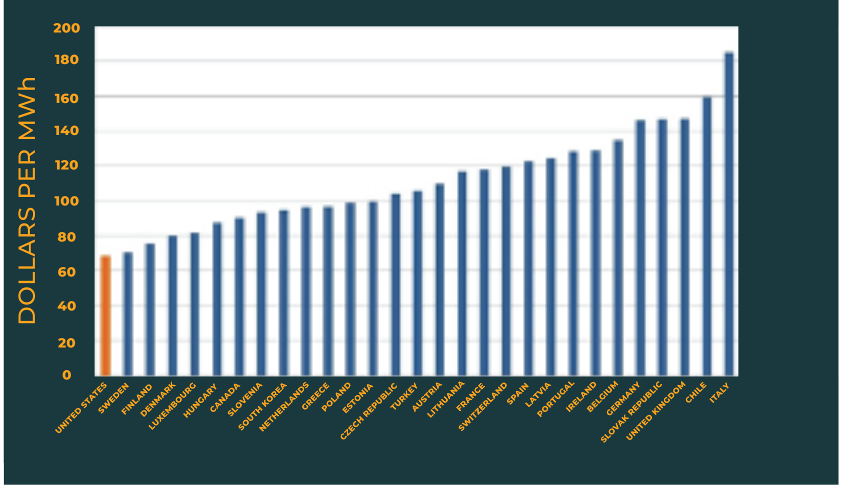
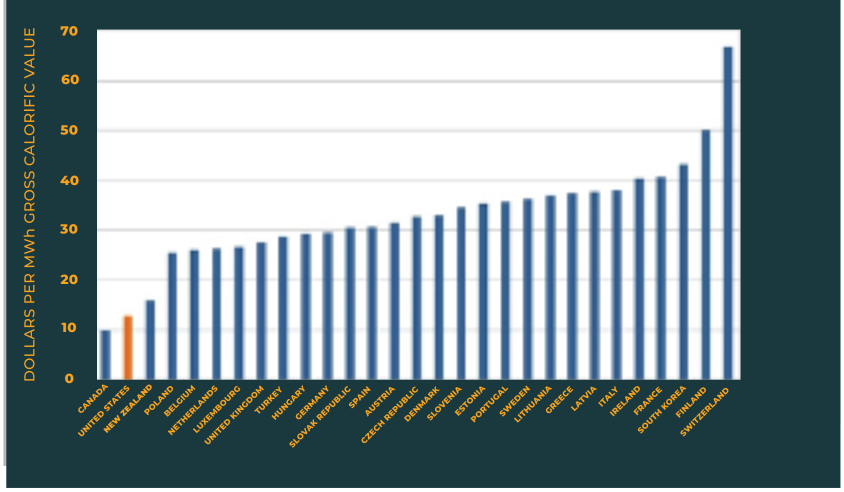


FIGURE 3. NATURAL GAS PRICES FOR INDUSTRY: 2019



Keystone in the Crosshairs

Given these successes, it is something of a mystery why shortly after President Biden's inaugural address on unity, one of his first acts as president was signing an executive order revoking the permit for the Keystone XL pipeline, which would move crude oil from Canadian fields to American refineries.

When completed, the pipeline would have a capacity of about 830,000 barrels per day of heavy Canadian crude oil to U.S. refineries. Also, it would improve market access and distribution to Gulf refineries for 100,000 barrels per day of U.S. domestic crude produced in the Bakken region of Montana and North Dakota.

TC Energy, the company building the pipeline, estimated that, "In total, Keystone XL is expected to employ more than 11,000 Americans in 2021, creating more than $1.6 billion in gross wages." Leave aside the clumsiness of this episode in U.S. energy diplomacy and the cavalier dismissal of an established process to achieve a political end; at the stroke of a pen, the President caused 1,000 U.S.

workers to be let go immediately and ended future prospects for 10,000 more. With tens of millions of American's still unemployed, is it a smart idea to kill *existing* jobs?[1]

Letting those workers stay employed to complete the pipeline also would enhance U.S. energy security.

The president's justification for stiffing an ally, abandoning established review procedures, and killing the project—climate change—is unpersuasive. The fact is, Canadian crude oil is going to find its way to U.S. markets, with or without the pipeline.

U.S. refineries, especially those on the Gulf Coast are among the most sophisticated in the world. They're designed specifically to process heavy, sour crude oil like that coming from Canada. The type of crude oil being produced in record quantities from U.S. shale formations tends to be lighter and sweeter, which makes it less than ideal for U.S. Gulf Coast refiners but excellent for export at a price premium reflecting its high quality. That's called a comparative advantage.

The Keystone saga has been going on since the Obama administration tried to kill it by denying it a permit. Even without the pipeline, however, the data shows quite clearly that exports of crude oil from Canada to the United States since then continue to climb, both volumetrically and as a share of total crude oil imports. Figures from EIA show that from 2010 to 2019, imports of Canadian crude oil rose from a little below 2.0 million barrels per day to 3.8 million barrels per day, more than half of total crude oil imports to the United States.

Over the same period, the amount of Canadian crude oil being imported by rail—a less efficient, less safe, pricier, and more emissions-intense way to ship crude oil—increased from next to nothing to about 300,000 barrels per day in 2019, or about 8 percent of all the crude oil we import from Canada. With EIA projecting further increases in Canadian production, volumes coming into the country by rail are not likely to decline. Even the Obama administration's State Department's *Final Supplemental Environmental Impact Statement* for the project found that all of the no pipeline options considered resulted in greater shipments by rail and, as a result, greater emissions associated with crude oil movements. Clearly, rail imports are no substitute for pipeline imports.

Other countries that produce the kinds of crude oil our Gulf Coast refineries need are Saudi Arabia, Iraq, Colombia, and . . . Venezuela. The State Department's 2014 Final Environmental Assessment noted as much when it said: "When this demand [for heavy crudes] is not met by heavy Canadian supplies, it is met by heavy crude from Latin America and the Middle East." In fact, the increasing availability of Canadian crude oil allowed the United States to cut back on the amounts imported from Venezuela, which not all that long ago totaled nearly 1.4 million barrels per day. This trend, in turn, gave the Trump administration greater diplomatic flexibility as it considered, and ultimately placed, sanctions on oil exports from that country.

[1] These Keystone construction jobs often are described as temporary—as can be said of virtually all construction jobs. It is important to keep in mind the findings of the September Labor Department IG report, which found that while nearly 70,000 green job trainees were targeted for retention, only 1,336 participants retained employment for at least six months, a success rate of about 2 percent.

With Keystone XL unavailable and Venezuelan crude deservedly off limits, Bloomberg is reporting that U.S. refiners are turning more and more to Russia for crude oil supplies. That's right, Russia. "Russia is now the third-largest supplier of America's annual imports of oil and refined products, accounting for a record 7 percent of the total in 2020 after years at less than 0.5 percent of the share," reports Bloomberg. This development was as predictable as it is worrisome.

The president's open hostility to pipelines in general and to Keystone specifically doesn't extend to Russia's Nord Stream 2. This controversial pipeline would move Russian natural gas under the Baltic Sea to Germany for distribution throughout Western Europe. Europe already gets 40 to 45 percent of its gas imports from Russia, and Nord Stream 2 would make U.S. allies and partners in Europe more susceptible to Moscow's malign influence.

Opposition to Nord Stream has been broad and bipartisan. Congress has overwhelmingly passed legislation imposing sanctions on companies supporting the pipeline. In January 2021, President Trump imposed sanctions against the Russian pipe laying vessel Fortuna and its owner KVT-RUS for its involvement in the project.

In 2016, then-Vice President Biden rightly called Nord Stream 2 a "fundamentally bad deal for Europe." White House spokeswoman Jen Psaki recently confirmed he continues to hold that view. But his State Department issued a Congressionally-mandated report that inexplicably failed to list any new companies working on the project in defiance of U.S. law. This is despite publicly available information on vessels and companies helping to complete the pipeline.

Previously sanctioned companies already have deserted the project. By failing to identify and sanction entities and vessels currently involved in the pipeline, the Biden administration effectively gave Nord Stream 2 the green light.

This careless decision is a cold slap in the face to the 11,000 American workers whose good-paying jobs were killed by President Biden's executive order. He is choosing the Kremlin over Keystone. After these two clumsy and costly episodes in U.S. energy diplomacy, it's not unreasonable to ask why the president seems more intent on saving Russian jobs than American jobs.

The only thing killing the Keystone pipeline accomplishes is making us less employed, less productive, and less energy secure.

Federal Oil and Gas Ban Threatens Jobs and Revenues

The second salvo in the Biden administration's war on American energy was fired a week later on January 27, 2021, when the president signed an executive order suspending oil and gas lease sales on federal lands. "To the extent consistent with applicable law," the order states, "the Secretary of the Interior shall pause new oil and gas leases on public lands or in offshore waters pending completion of a comprehensive review of and reconsideration of Federal oil and gas permitting and leasing practices . . ."[2] Not only will this order stop new projects, it can and will be used to stop existing projects, as well.

According to data from BLM and EIA, crude oil production on federal land in 2019 made up about one-fifth of total production in the United States. While that is down as share of total production from one-third as recently as 2010, the amounts being produced since then actually have increased 37 percent to nearly 2.7 million barrel per day.

TABLE 3. SHARE OF STATE PRODUCTION ON FEDERAL LANDS: 2019

STATE	CRUDE OIL	NATURAL GAS
COLORADO	4%	36%
LOUISIANA	1%	1%
MONTANA	14%	26%
NEW MEXICO	51%	65%
NORTH DAKOTA	9%	1%
TEXAS	0%	1%
UTAH	22%	57%
WYOMING	47%	89%
UNITED STATES	20%	13%

This ill-considered executive order will take a wrecking ball to our energy economy, especially in Western states, which tend to have a large portion of their total production occurring on federal land. BLM estimates that in FY 2019, oil and gas activities on federal lands supported 318,000 jobs (compared to 9,000 for renewable energy) and were responsible for almost $76 billion in economic output.

Table 3 shows for selected states the share of total output of crude oil and natural gas coming from federal lands. New Mexico and Wyoming, in particular, depend on federal lands for the lion's share of output of both crude oil and natural gas. Colorado, Montana, and Utah are also heavily dependent on federal lands for energy production, especially for natural gas. Together, the states in Table 3 make up more than 95 percent of all the federal onshore crude oil and natural gas production in the United States.

Restrictions on production from federal lands will therefore have disproportionate economic and budgetary impact on these states, which depend on disbursements from this production to, among other things, fund schools and other government functions. How are state governments to fund essential programs when they are being handicapped by the federal government?

[2] Not wasting any time, the Bureau of Ocean Energy Management on 12 February 2021 pulled its Record of Decision for the oil and gas lease planned in March for the Gulf of Mexico. This decision essentially cancels the bidding for Gulf blocks totaling about 78 million acres.

According to BLM, Pre-COVID FY 2019 revenue from oil and gas leases on federal land were $9.7 billion[3] (vs. $410 million from wind), and total revenues from all resources extraction activities were $10.9 billion.[4] That means oil and gas production accounted for 90 percent of revenues from federals lands. If the $414 million from coal mining is added to this, that raises this figure to 94 percent

Oil and gas activities provided about 86 percent of revenues in FY 2019. If disbursements are prorated by source, oil and gas were responsible for $9.1 billion of the nearly $10.6 billion in disbursements from all resource-related activities on federal lands.

Table 4 includes data from five Western states that are largely reliant on revenues generated from federal lands. The percent of the revenue generated from federal lands in these states is heavily weighted to oil and gas activities. Oil and gas activities in New Mexico, for example, accounted for an astonishing 99 percent of all the revenue from federal land there. Should the ban on oil and gas activities become permanent, these states would potentially be left with huge budget holes to fill. New Mexico in FY 2019 got more than a billion dollars in oil and gas-related disbursements. For Wyoming, the figure is $433 million.

Coal is sure to be on the administration's hit list, too. When its revenues are added in and the disbursement calculated, the potential budgetary impact of a federal lands bans are even more distressing, especially for Wyoming and Montana, as Table 4 shows.[5] With many states suffering from budgetary strains due to the COVID-19 pandemic, policy makers should be looking for ways to generate more economic growth to help shore up state and local budgets, not looking for ways to cut off needed revenue.

TABLE 4. REVENUES & DISBURSEMENT FROM OIL & GAS AND COAL ACTIVITIES ON FEDERAL LANDS: FY 2019 (MILLIONS OF DOLLARS)

STATE	TOTAL REVENUE	O&G REVENUE	O&G REVENUE AS A SHARE OF TOTAL (PERCENT)	TOTAL DISBURSEMENT	ESTIMATED DISBURSEMENT FROM O&G	COAL REVENUE	O&G AND COAL REVENUES AS A SHARE OF TOTAL (PERCENT)	ESTIMATED DISBURSEMENT FROM O&G AND COAL
COLORADO	230	147	64%	108	69	29	76%	82
LOUISIANA	64	26	40%	30	12	38	100%	30
MONTANA	2,469	2,453	99%	1,166	1,159	6	100%	1,161
NEW MEXICO	155	109	71%	72	51	42	98%	70
WYOMING	1,382	934	68%	641	433	320	91%	582

[3] Includes revenues from oil, natural gas, natural gas liquids, and oil shale.
[4] These date do not include tribal lands.
[5] To put some of the figures Table 4 in perspective, a potential $1.16 billion loss in revenue would represent about 15 percent of New Mexico's current state budget and $582 million loss about 7 percent of Wyoming's.

Then, there are the potential job losses. The American Petroleum Institute commissioned a study by OnLocation that found a permanent ban on federal leasing would have the biggest relative impact on Western states. Under a ban, total projected peak job loss across the country was nearly 1 million jobs, with the biggest number (about 120,000) coming in Texas. As a share of total jobs in the states, however, it was estimated that Wyoming could lose a bit more than 8 percent of its entire workforce and New Mexico about 5.5 percent of its workforce.

States along the Gulf Coast, which benefit tremendously from offshore production of oil and gas, also would get whacked under a ban. An analysis prepared by Energy Industrial and advisory Partners for the National Ocean Industry Association found the offshore industry supported around 345,000 jobs in 2019. The report estimates that: "On average from 2031 to 2040 around 357 thousand jobs are projected to be supported by the Gulf of Mexico offshore oil and natural gas industry. The largest employment impact is projected in the Gulf Coast states, with an average of 156 thousand jobs supported in Texas across the 2020-2040 forecast period, around 105 thousand jobs in Louisiana, over 30 thousand jobs in Alabama, over 22 thousand jobs in Mississippi, and around 57 thousand jobs in the rest of the U.S." It found that a permitting ban would slash offshore-related jobs in Texas by 51 percent, in Louisiana by 50 percent, in Alabama by 41 percent, and in Mississippi by 47 percent.

It is not just workers at risk. Revenues, too, are in for a tough time. Federal and state revenues also would a fall under a ban. In FY 2019, nearly $5.4 billion in revenue was generated in the Gulf Coast, and revenues are expected to average about $7 billion in the future. The study projects that under a sharing arrangement under the Gulf of Mexico Energy Security Act, the total amount of revenue sharing would be capped at $375 million through 2040, with Louisiana ($165 million) and Texas ($101 million) getting the largest shares. Under a scenario with a permitting ban, total annual revenues would dip $102 million, or 27 percent for each Gulf state.

"Better Choices"—Let Them Build Solar Panels

In an unconvincing defense of the administration's green stimulus plans at a White House event on 27 January 2021, special presidential envoy for climate John Kerry had this to say to energy workers afraid of losing their livelihoods, ". . . the choice of doing the solar power one now is a better choice. And similarly, you have the second-fastest-growing job pre-COVID was wind turbine technician." This was barely a week after the president killed 11,000 Keystone pipeline jobs.

Kerry is right that wind turbine technician and solar photovoltaic installer are, according to data from the Bureau of Labor Statistics, among the fastest growing job categories, but only because it is starting from a small base to begin with. Even after taking the timeline into account, however, some context is called for. By 2029, BLS expects wind turbine technician positions to

TABLE 5. BUREAU OF LABOR STATISTICS PROJECTED EMPLOYMENT CHANGE: 2019 - 2029		
JOB CATEGORY	2019-2029 CHANGE	AVERAGE ANNUAL OPEN-INGS
WIND TURBINE TECHNICIAN	4,300	1,300
SOLAR PHOTOVOLTAIC INSTALLER	6,100	2,300
TOTAL, WIND & SOLAR	10,400	3,600
OIL & GAS SECTOR:		
DERRICK OPERATORS	3,700	2,000
ROTARY DRILL OPERATORS	5,600	3,400
SERVICE UNIT OPERATORS	11,800	8,100
ROUSTABOUTS	14,700	8,800
PUMP OPERATORS	1,000	1,200
WELLHEAD PUMPERS	600	1,500
TOTAL, OIL & GAS	37,400	25,000

grow by 4,300 and solar photovoltaic installer positions by 6,100 for a total of 10,400 jobs (see Table 5), much lower than the expected figures for other job categories with less rapid rates of growth. Even the Washington Post was forced to concede that Kerry "is offering false hope with a misleading use of statistics" and awarded two "Pinocchios."

A deeper dive into BLS data reveals significant projected job increases for oil and gas workers the administration has little use for. These also are presented in Table 5. The six categories of oil and gas-related jobs listed by BLS are expected to increase by a total of 37,400 by 2029, a much higher amount than the solar and wind jobs cited by Kerry.

The table lists average annual openings projected by BLS as well as median salary and typical entry-level education. Compared to the wind technician and solar installer jobs, in most cases the oil and gas jobs are expected to have more—in some cases many more—average annual openings and comparable or higher median salaries. In short, these are good (often union) jobs that support middle class incomes and provide needed energy.

Of course, since BLS does not capture the full panoply of jobs in these and other energy sectors, it's hard to draw sweeping conclusions about the relative merits of jobs in different energy sectors. These data do, however, provide a valuable look at the types of jobs the administration wants to regulate away simply because they are politically unfashionable. Little wonder President Biden's proposed green energy stimulus has oil, gas, and coal workers seeing red.

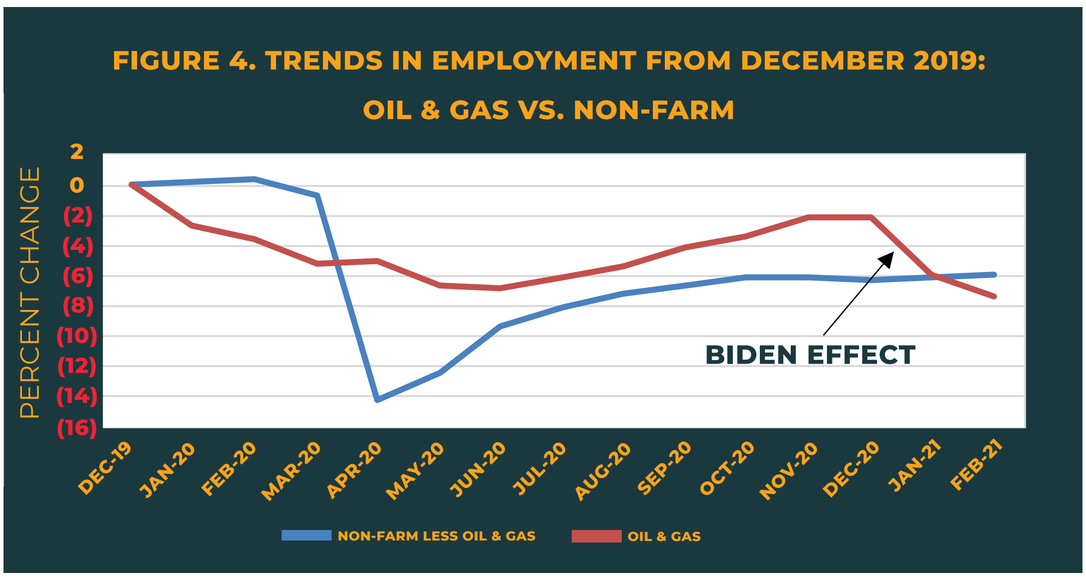
Oil and gas sector jobs also are unambiguously American jobs, and they will stay that way. That is not always the case with "green" jobs. A case in point is Germany. Clean Energy Wire recently reported that an analysis done for the German Trade Union Association found that, "The number of jobs in solar PV panel production and installation fell from a record 133,000 in 2011 to under 28,000 seven years later. In the wind industry, employment dropped from its record level of roughly 108,000 in 2016 to under 70,000 just two years later." The reason? Competition from China. Despite the president's claims that green jobs will be American jobs, there are no guarantees that what is happening in Germany and other countries cannot happen here.

Conclusion

One of the ironies of President Biden's push for a green energy stimulus at the expense of those that supply about four-fifths of the energy we use every day is that President Obama assigned Vice President Biden the task of overseeing the stimulus spending spree that was the ARRA. President Obama said "To you, he's Mr. Vice President. But around the White House we call him 'the sheriff,' because if you're misusing taxpayer dollars, you'll have to answer to him." Yet as we have documented, the way taxpayer money was frittered away in boondoggles was scandalous.

President Biden may have the experience, but has he learned anything from it? Based on his first few weeks in office, the answer is a resounding "no." As we have seen, green jobs had no stimulating impact on the recovery following the financial crisis of 2009.

The contrast with the oil and gas sector rebound could not be clearer. Back in 2009, this sector roared ahead, making it one of the few sectors invigorating a sluggish recovery.



The same sector was set to make a strong rebound again in 2021.

Figure 4 shows the percent change in employment in the economy as a whole and in the oil and gas sector since the pandemic hit in late 2019. From June to December 2020, BLS data show jobs in the oil and gas sector increased at an annual rate of nearly 12 percent—about twice the rate for the economy as a whole over the same period.

Figure 4 also shows, however, how the president's executive orders halting Keystone and suspending oil and gas lease sales on federal lands suddenly reversed job growth in the oil and gas sector. The data show that from December 2020 to February 2021, job growth plunged 5.4 percent.

Like with the Obama administration's energy plan, the problem with the Biden administration's plan is that it is "all of the above, none of the below." No oil, no natural gas, and no coal. In other words, it is antagonistic to the sources of energy that fuel 80 percent of the economy and are expected to fuel a similar share well into the future. The U.S. energy sector, and the oil and gas sector in particular, can once again become an engine for jobs, economic stimulus, and long-term growth. If only the administration will let it.

Instead, the Biden administration seems intent on doubling down on the failures we have documented in this report. From green jobs training, to Cash for Clunkers, to high-speed rail, to financing politically connected green companies that go bust, it's the same Obama-Biden administration playbook, just with a higher price tag.

The president's multi-trillion dollar infrastructure plan, for example, would devote $174 billion of taxpayer funds to, among other items, modify car factories to build electric vehicles and provide subsidies to encourage (generally wealthier) consumers to trade in their internal combustion engine cars for EVs. That's how the cash for clunkers operated. We know how that turned out.

Whether it's called the Green New Deal, Build Back Better, or "The American Jobs Plan," the Biden administration seems determined to repeat the same mistakes, while expecting different results.

America couldn't afford Vice President Biden's Solyndra Syndrome in 2009. Now, President Biden is back for more.