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**Before the House Committee on Science, Space and Technology**  
**Hearing to Examine the Science of EPA Overreach: A Case Study in Texas**  
**February 5, 2014**

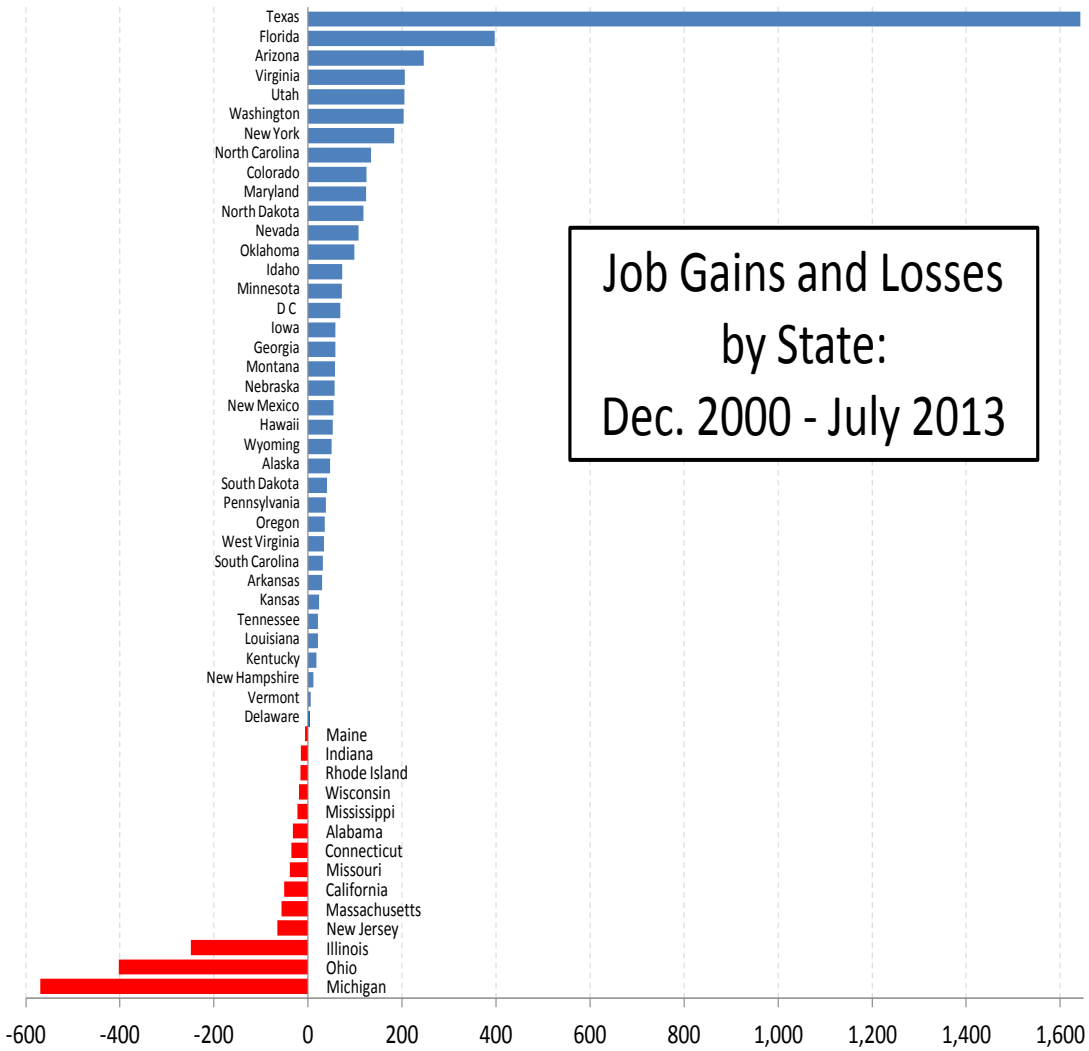
Mr. Chairman and Members of the Committee, my name is Bernard Weinstein and I am the Associate Director of the Maguire Energy Institute at Southern Methodist University (SMU) and an adjunct professor of business economics at SMU's Cox School of Business. Thank you for this opportunity to speak to you today.

As a general proposition, the state of Texas has seen relatively robust job creation in recent years largely due to the production and availability of affordable and reliable fossil fuels and energy. Federal regulation recently promulgated or under consideration by the US Environmental Protection Agency and other federal agencies carries with it the potential to short circuit this power house of economic recovery, raising energy prices in a manner that may dampen growth across the country. If regulatory development is appropriately flexible and pragmatic, however, such impacts could be minimized.

*First, a word on current economic conditions in Texas*

Last week, the U.S. Bureau of Labor Statistics released its 2013 employment growth numbers for each of the 50 states, and for the fourth straight year Texas led the nation by adding 252,400 workers to payrolls. Texas also added the most jobs of any state during the month of December. California came in second with 235,700 new jobs, but the Golden State's population is 50 percent larger than Texas. More incredibly, Texas has accounted for more than half the nation's job growth since 2000 (see Figure 1).

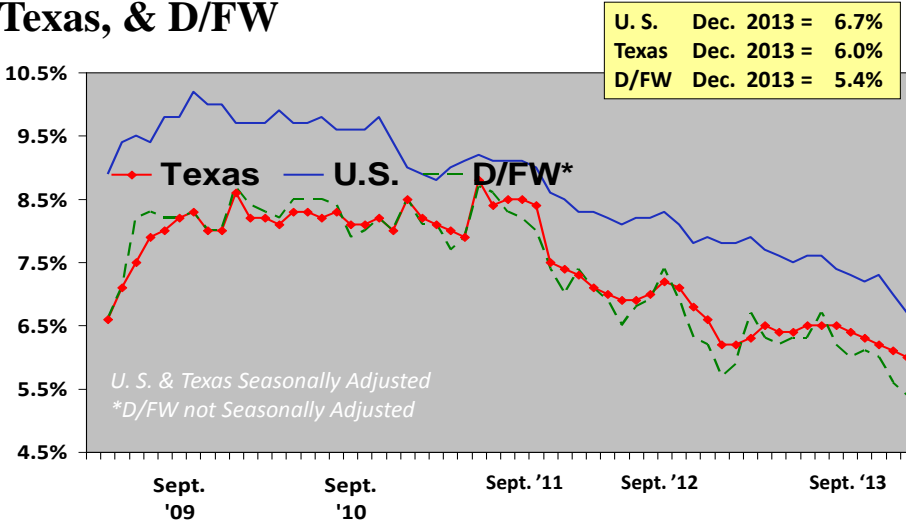
FIGURE 1



Texas is not immune from the ups and down of the business cycle, as can be seen in the following graphic. But since the Great Recession hit the U.S. economy six years ago, Texas' unemployment rate has remained well below the national average (see Figure 2). The state has not only recovered all the jobs lost during the economic downturn, it has added about 600,000 from the previous peak in 2008.

FIGURE 2

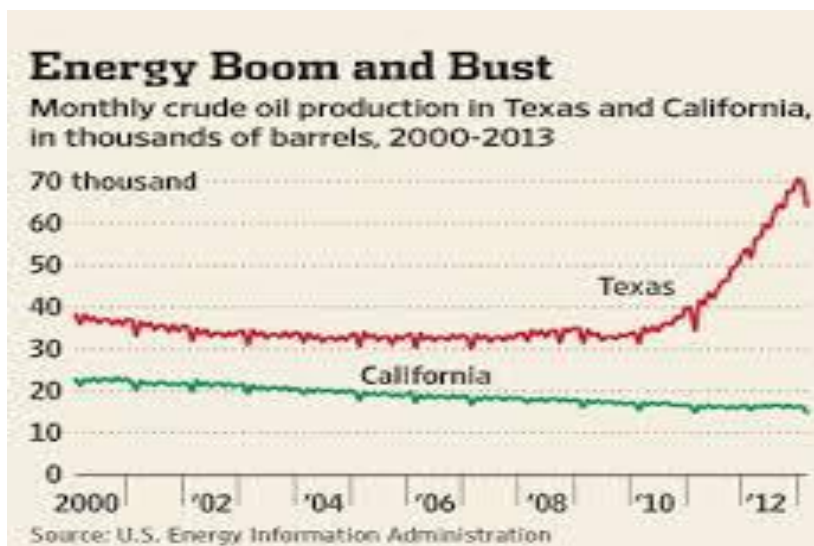
## Unemployment Rate, U. S., Texas, & D/FW



Source: Texas Workforce Commission

Without question, the tremendous growth in oil and gas production resulting from the “shale revolution” has accounted for much of Texas’ superior economic performance (see Figure 3). The state now accounts for 25 percent of America’s oil and gas and would rank as the 15<sup>th</sup>-largest producer in the world if we were a separate nation.

FIGURE 3



(As an aside, if California had been more supportive of energy development, especially in the huge Monterey Shale, their oil production would be increasing rather than declining, and that state's unemployment rate wouldn't be almost two and one-half points higher than Texas.)

But it's also important to note that the energy boom in Texas, North Dakota, Pennsylvania, Colorado and other states has benefitted the entire nation by reviving our industrial base, boosting our exports, and reducing our trade deficit while creating hundreds of thousands of new high-wage jobs and holding down electricity and heating costs for American households and businesses. For example, in just a few years America has shifted from being a net importer of petrochemicals to a net exporter, and last year Honda exported more vehicles from the U.S. than it imported.

Texas' economic fortunes can also be attributed to a positive business climate and sensible, cost-effective regulation of energy and other sectors of the state's economy. Contrary to assertions by some environmental activists, Texas is not a toxic wasteland. We care greatly about the quality of our air, water and land. But we make sure our regulatory environment is predictable and effective so that the costs of compliance aren't burdensome to the point of discouraging new investment.

### *A tsunami of federal regulation*

America is currently being hit by a tidal wave of new federal regulations with more than 4,000 currently out for implementation or comment. Among the potentially most onerous are new, proposed and forthcoming regulations that will affect oil and gas production and electric power generation. Naturally, as the nation's largest energy producing and consuming state, Texas is concerned about Federal "regulatory overreach."

For example, both the Bureau of Land Management (BLM) and the Environmental Protection Agency (EPA) appear to be champing at the bit to get into the business of overseeing hydraulic fracturing, the drilling process that is responsible for America's shale revolution. The BLM recently issued numerous new environmental and safety rules pursuant to hydraulic fracturing for natural gas and oil on Federal and Indian lands. Though only 25 percent to 30 percent of fractured wells are on federal lands, 90 percent of these wells use hydraulic fracturing, and the proposed rules may become the template for federal oversight of fracking on private leases as well. The alleged justification for these new regulations is to ensure that fracking doesn't contaminate groundwater or cause earthquakes.

Specifically, the BLM is requiring that drilling companies (a) disclose the names of all chemicals contained in fracking fluids, (b) set tighter standards for well-bore integrity to verify that fluids used during operations are not contaminating groundwater, and (c) develop water management plans for handling fluids that flow back to the surface. At the same time, the EPA is "studying" the potential impact of hydraulic fracturing on drinking water and is currently receiving comments on proposed rules for reducing methane emissions and volatile organic compounds (VOCs) from hydraulically-fracked wells.

These are examples of federal regulators arriving late to a party to which they weren't invited and aren't needed. For more than 40 years, the individual states have had exclusive regulatory oversight of natural gas drilling, and hydraulic fracturing has been used in more than one million wells across the U.S. But the BLM and EPA rules have the potential to create a "one-size-fits-all" federal regulatory regime on top of specifically crafted state programs.

What's more, careful studies by the EPA and the Ground Water Protection Council haven't revealed a single case of ground water contamination from shale drilling. That's because the fracturing occurs far below the location of drinking water, and the wells are encased in steel and concrete to ensure isolation from ground water. All but one percent of the fracturing mixture is made up of water and sand, so the small amount of chemicals and additives is well diluted. Furthermore, most states already require disclosure of chemicals used in drilling fluids.

As for earthquakes, the U.S. Geological Survey recently completed a study that concluded fracturing does not cause them. The study did find an increase in "seismic activity" near some well sites but attributes that to injections of well wastewater and not fracking itself. The study also notes there are more than 140,000 disposal wells in the U.S. with only a handful potentially linked to seismic activity. Importantly, the U.S. Geological Survey found that the "earthquakes" were fairly small and rarely caused damage.

According to a recent analysis prepared by the Western Energy Alliance and the Independent Petroleum Association of America, the annual cost of complying with the proposed BLM rules would exceed \$345 million, or \$97,000 per well, in the western states alone. What's more, the bureau's rules come on the

heels of 588 pages of new EPA regulations to control alleged air pollution from natural gas wells. Not only are these new directives from the BLM and EPA duplicative of state regulations, complying with them will impose unnecessary additional costs on drilling companies and likely slow the pace of permitting on federal lands.

To avoid these duplicative costs, Congress should enact HR 2728, a bill that would allow state regulations regarding hydraulic fracturing to supersede any forthcoming federal standards. In states without their own regulations, the federal regulations would apply.

Other examples of EPA overreach abound. Within the past few years, the agency has proposed two new air quality rules that could prove extremely costly to Texas' and America's utilities and manufacturers: (1) the Cross-State Air Pollution Rule (CSAPR) that would cap key emissions crossing state lines and (2) the Utility Maximum Achievable Control Technology Rule (MACT) that would set absolute limits on mercury and other chemical emissions. The CSAPR was overturned by the D.C. Circuit Court of Appeals and is now under review by the US Supreme Court.

The Utility MACT may prove to be the most expensive direct rule in EPA history. Indeed, EPA itself has estimated it will impose costs of about \$11 billion a year on the US economy, though third-party estimates of compliance costs are considerably higher.<sup>1</sup> For example, an analysis by National Economic Research Associates (NERA) finds that complying with the proposed standards will cost power companies close to \$18 billion per year for the next twenty years.<sup>2</sup> Some coal-fired plants will be so expensive to retrofit to comply with the standard that they will simply be shut down.

The NERA study projects that about 48 gigawatts of coal generation may be retired by 2016, representing a 13 percent decline. New natural gas generators would be the most likely substitutes for these shuttered facilities, and the increased demand for gas is estimated by NERA to push up gas prices by about 17 percent by 2016. Higher prices, in turn, will increase natural gas expenditures by the residential, commercial, and industrial sectors of the economy by \$85 billion (present value over 2011-2030 in 2010\$) or \$8.2 billion per year. Average retail electricity prices could jump by about 12 percent with some parts of the country recording increases as high as 24 percent.

With a dozen active and producing mines<sup>3</sup>, coal-powered generation is of particular significance to Texas. One recent study found that, "Electric power generation fueled by Texas-produced lignite coal and Wyoming coal is a major source of economic activity in Texas. This industry creates \$4.2 billion in statewide economic activity supporting over 13,600 direct and indirect jobs, and boosting labor income by \$1.1 billion. Tax revenues for state and local jurisdictions total almost \$500 million each year from coal fueled power generation in Texas."<sup>4</sup>

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<sup>1</sup> US Environmental Protection Agency, *Regulatory Impact Analysis of the Proposed Toxics Rule: Final Report*, March 2011.

<sup>2</sup> National Economic Research Associates, *Proposed CATR + MACT*, May 2011.

<sup>3</sup> National Mining Association, *US Coal Reserves by State and Type*, updated December 2013 (data source to US Department of Energy and the Energy Information Administration)

<sup>4</sup> Terry L. Clower and Manuel Reyes, Center for Economic Development and Research, University of North Texas, *Coal Mining and Coal-Fired Power Generation in Texas: Economic and Fiscal Impacts*, February 2013.

In addition to CSAPR, Utility MACT, and new greenhouse gas (GHG) regulations for new power plants, EPA has promulgated several other rules that will affect the utility sector. These include air quality standards for sulfur dioxide, nitrous oxide, and fine particulate matter as well as new standards for ash and other residuals from coal combustion. Taken together, these regulations will impact about 400,000 megawatts (MW) of oil and coal-fired power generation, almost 40 percent of currently available US capacity. Should all of the proposed implementation deadlines remain unchanged, the reliability of the entire US power grid could be compromised.

The utility industry is already laboring to comply with these and a myriad of other EPA mandates. The result could well be a reduction in reserve margins, making less power available during periods of peak demand or plant outages. Imagine what would have happened in Texas and other southern states that rely heavily on coal-fired generation during the record summer heat wave of 2011 and this year's "Polar Vortex" if adequate reserve power had not been available? Not only would many energy-intensive industries have been forced to shut down, but rolling blackouts could have put the public's health at risk in the face of 100 degree-plus or sub-freezing temperatures week after week.

This prospect was highlighted by the Electric Reliability Council of Texas, which operates the state grid, who stated that likely production cuts to comply with the proposed CSAPR rules alone would have threatened the state's ability to keep the lights on.<sup>5</sup> American Electric Power Company has stated it will retire nearly 6,000 MW of generating capacity if the CSAPR rule is reinstated while Duke Energy will shutter 862 MW and Georgia Power another 871 MW.<sup>6</sup>

Should the EPA promulgate costly GHG emissions reductions for existing coal-fired plants, even more generating capacity is likely to go offline, further weakening the integrity of the power grids in Texas and elsewhere. And ERCOT has stated that it expects consumption in its power region to increase by 39.4 percent from 2007 through 2025, at the very time compliance with these and other regulations may force plant retirements.

The bottom line is that federal regulation does not stimulate the economy of Texas or the nation. No serious economist would stand before this Committee and defend that proposition. Indeed, the most recent data show that, "Regulation's overall effect on output's growth rate is negative and substantial. Federal regulations added over the past fifty years have reduced real output growth by about two percentage points on average [annually] over the period 1949-2005. That reduction in the growth rate has led to an accumulated reduction in GDP of about \$38.8 trillion as of the end of 2011."<sup>7</sup> Put another way, if regulation had remained steady, GDP in 2011 would have been \$53.9 trillion instead of \$15.1 trillion, meaning "the average American household receives about \$277,000 less annually than it would have gotten in the absence of six decades of accumulated regulation."<sup>8</sup> With EPA and others placing

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<sup>5</sup> "Energy Future Holdings envisions cutting power production to comply with EPA rules," *Dallas Morning News*, July 30, 2011. See also, Office of the Texas Comptroller of Public Accounts, Texas in Focus: A Statewide View of Opportunities, available at <http://www.window.state.tx.us/specialrpt/tif/energy.html>

<sup>6</sup> "Dozens of coal factories forced to shut down in response to strict EPA regulation," *Business Insider*, August 9, 2011.

<sup>7</sup> John W. Dawson and John J. Seater, "Federal Regulation and Aggregate Economic Growth," *The Journal of Economic Growth*, January 2013.

<sup>8</sup> Ronald Bailey, "Federal Regulations Have Made You 75 Percent Poorer," *Reason*, June 21, 2013 (commenting on Dawson and Seater's study).

regulatory targets on power generation and fossil fuel development of particular significance to Texas, policy makers that state would do well to take notice.

*The likely impact of EPA greenhouse gas (GHG) regulations on Texas' and America's power sector*

On January 8th of this year, the EPA proposed the first uniform national limits on the amount of greenhouse gas emissions for new fossil-fueled power plants. These standards are so restrictive they will likely block the construction of new coal-fired power plants in Texas and elsewhere unless they utilize novel and expensive technology to capture carbon. In fact, the newest and most advanced coal-fired generators in Texas, and the rest of the world for that matter, can't meet the proposed emissions limit of 1,100 pounds of CO<sub>2</sub> per megawatt hour for new power plants. Beyond these proposed carbon regulations lay regulations for the existing fleet of fossil fuel power plants in Texas and beyond.

Further down the road, EPA plans onerous carbon regulations for petroleum refineries. As the Texas Comptroller of Public Accounts has reported, "Texas has 25 oil refineries that have a refining capacity of 4.7 million barrels of oil per day, approximately one quarter of all U.S. refining capacity." See <http://www.window.state.tx.us/specialrpt/tif/energy.html>

The Energy Information Administration is already predicting a 15 percent decline in coal-fired electricity generation by 2016. The proposed GHG limits for new coal plants, and the forthcoming EPA regulations for GHG emissions from existing power plants, will likely accelerate this trend. As discussed above, Texas' primary grid operator predicts significant growth in demand over the same period.

Some have suggested that the benefits of carbon reduction outweigh its regulatory costs. However, unilateral carbon regulations in the US will do little to affect global warming which is, as the name implies, a global phenomenon. What's more, greenhouse gas emissions in the United States are lower today than they were 20 years ago, even with an economy that's more than 50 percent larger. As the EPA has noted, "climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emission to zero, that step would be far from enough to avoid substantial climate change."<sup>9</sup>

Assuming no pushback from Congress and industry, in theory the EPA could move us toward the carbon-free economy that is the ultimate goal of the environmental community. But at what cost in terms of lost jobs, higher energy prices, and limited consumer choice?

The EPA is not the best way to attack climate change. Though federal law requires agencies like the EPA to calculate the costs and benefits of its proposed rules, politics often trumps economics when preparing these studies. For example, the purported "social costs" of carbon may be included in cost-benefit calculations to either support new EPA restrictions on power plant emissions or to make the case against a project like Keystone XL. Given the Administration's recent move to quietly increase the so-called social cost of carbon from \$21 to \$35 per metric ton, we can expect future regulations to be more costly since the estimated benefits will be artificially higher.

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<sup>9</sup> US EPA, Technical Support Document, Social Cost of Carbon for Regulatory Impact Analysis (February, 2010) at 10.



The only effective way to significantly reduce global GHG emissions is through a coordinated strategy involving all of the planet's major economies. Otherwise, any marginal reductions in America as a result of the president's proposals will be more than offset by rising emissions in China, India, Brazil, and other fast-growing economies around the world. Indeed, if US industry migrates to other potentially less energy-efficient nations as a result of carbon regulatory burdens at home, carbon emissions may even increase as goods travel back to the US market.

Still, there is much we can do at home. In particular, investing in natural gas and nuclear power can be much more effective approaches for diversifying our base-load portfolios and thereby reducing CO2 emissions than the regulatory regime proposed by the President and by the NRDC. As a result of market economics, clean natural gas now accounts for 30 percent of America's electricity supply compared with 20 percent five years ago. In Texas, natural gas accounts for more than half of the state's power generation. With supplies projected to remain abundant and prices competitive for the foreseeable future, natural gas may eventually surpass coal as the nation's primary fuel for utilities and manufacturers.

Here's another way to reduce GHGs globally with no cost to taxpayers—accelerate American exports of liquefied natural gas. The world is hungry for clean natural gas, especially for use in electric power generation. With gas prices averaging \$12 in Europe and \$15 in Asia, US gas at \$4 is a bargain, even when processing and transportation costs are included. Two liquefaction plants and export terminals are currently under construction, one in Freeport, Texas. Two other facilities have been approved. The Department of Energy should expedite the approval of more than a dozen other export permit applications currently pending. To the extent countries like China, India and Indonesia use our gas instead of their coal to generate electricity, American exports are helping to fight climate change.

We also need to encourage a nuclear revival in America. Though the US has 104 nuclear plants operating in 31 states, no new facilities have been ordered since the 1970s. Still, those plants currently generate about one-fifth of the nation's electricity while emitting no greenhouse gases. Investing in new nuclear power plants will be good for the economy, good for the environment, and good for energy security.

### *Conclusion*

In a difficult economic period of recession and a sluggish recovery, energy has been a bright spot. Nationwide, total employment remains below its 2008 peak. But the number of jobs in oil and gas extraction has jumped more than 25 percent. States like Texas, North Dakota, Louisiana, Pennsylvania and Colorado that have been supportive of energy development have fared much better than states like California and New York that are richly endowed with oil and/or natural gas but have imposed serious obstacles to the use of hydraulic fracturing.

America is a country of multiple jurisdictions: local, state, and federal. Historically, the regulation of energy production has been the purview of the individual states, and it should remain that way. Only states know their own unique regulatory needs. For example, fracking in North Dakota is different from fracking in Pennsylvania.

Growing federal intrusion into energy regulation by the EPA, the BLM and other federal agencies runs the risk of stymieing America's energy boom while driving up the costs of producing oil, gas and electricity that, in turn, will be borne by the country's business and households. Careful oversight of the

energy industry is necessary. But over-regulation will have a chilling effect on the willingness of investors to continue developing America's abundant energy resources, with all the attendant jobs and tax revenues that entails.

*(For further documentation of EPA overreach, see:*

<http://www.bushcenter.org/sites/default/files/TheEnergyLogjam.pdf>)