

**Examining Environmental Barriers to  
Infrastructure Development**

**Subcommittee on the Interior, Energy and the  
Environment and Subcommittee on  
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My name is Nick Loris. I am the Herbert & Joyce Morgan Research Fellow at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

I want to thank the Members of the House of Representatives Committee on Oversight and Government Reform Subcommittee on the Interior, Energy and the Environment and Subcommittee on Intergovernmental Affairs for this opportunity to examine environmental barriers to infrastructure development.

America has a clean, healthy environment as well as safe, structurally sound infrastructure. However, America's major environmental policies are outdated and, consequently, stall infrastructure investment, misalign or create perverse incentives, and centralize power in Washington for little to no meaningful environmental benefit. My testimony will address the environmental policies and regulations that block or delay public and private infrastructure investment for both conventional infrastructure projects but also energy infrastructure.

### **The State of Infrastructure and Principles for Reform**

The perception that America's infrastructure is crumbling and in a state of despair is not borne out in the data. Bridges in need of extensive maintenance have declined steadily, highway pavement quality has improved, and American airports safely transport more people and products than any other country in the world.<sup>1</sup> Even so, opportunities exist to improve and expand the country's infrastructure needs.

Republicans and Democrats want more infrastructure investment but have different visions as to what projects the taxpayers should pay for and how they should pay for it. President Trump wants to invest \$1 trillion in infrastructure but has yet to put forth a substantive plan. Democrats in Congress have released their own plan that would spend an additional \$1 trillion on infrastructure, financed by an undisclosed tax increase on corporations and top individual income earners.<sup>2</sup>

The tax-and-spend approach is not only wasteful but ignores the fundamental problems with infrastructure policy, mainly that the federal government spends entirely too much on projects that are not federal in nature and fails to reform policies and regulations that drive up the cost of both public spending and private-sector investment. When crafting any new infrastructure legislation, policymakers should adhere to the following principles:

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<sup>1</sup>Michael Sargent, "Building on Victory: An Infrastructure Agenda for the New Administration," Heritage Foundation *Backgrounder* No. 4629, November 21, 2016, <http://www.heritage.org/budget-and-spending/report/building-victory-infrastructure-agenda-the-new-administration>.

<sup>2</sup>Democratic Policy and Communications Committee, "A Blueprint to Rebuild America's Infrastructure," January 24, 2017, <https://www.dpcc.senate.gov/files/documents/ABlueprinttoRebuildAmericasInfrastructure1.24.17.pdf> (accessed February 27, 2017).

- **Make** government spending more efficient by limiting spending to projects of national scope and priority;
- **Refrain** from creating new revenue streams for infrastructure funding;
- **Empower** the private sector and **improve** the efficiency of industry through reforming the tax code, eliminating regulations and policies that benefit special interests and privatization;
- **Reform** and **eliminate** regulatory obstacles that will stretch both public spending and private-sector investments further; and
- **Unleash** free enterprise in the energy sector, resulting in increased resource production but also more energy infrastructure.

There is a long list of necessary policy and regulatory changes Congress and the Trump Administration should adopt to stimulate infrastructure investment. This testimony, however, will focus on the major environmental roadblocks.

### **The State of the Environment and Principles for Reform**

Similar to complaints of a crumbling infrastructure, the public is often under the perception that America's environmental state is deteriorating. On the contrary, through innovation and investment in new technologies, as well as through legislation, air and water quality have improved significantly in the United States. Pollutants known to cause harm to public health and the environment are declining; in fact, the aggregate emissions of six common pollutants decreased 69 percent during 1970–2014.<sup>3</sup> According to the Environmental Protection Agency's (EPA's) latest air quality trends report,<sup>4</sup> the following pollutants decreased from 1990 levels:

- 77 percent decrease in carbon monoxide (CO) 8-hour;
- 99 percent decrease in lead (Pb) 3-month average;
- 54 percent decrease in nitrogen dioxide (NO<sub>2</sub>) annual;
- 47 percent decrease in nitrogen dioxide (NO<sub>2</sub>) 1-hour;
- 22 percent decrease in ozone (O<sub>3</sub>) 8-hour;
- 39 percent decrease in particulate matter 10 microns (PM<sub>10</sub>) 24-hour;
- 37 percent decrease in particulate matter 2.5 microns (PM<sub>2.5</sub>) annual;
- 37 percent decrease in particulate matter 2.5 microns (PM<sub>2.5</sub>) 24-hour; and
- 81 percent decrease in sulfur dioxide (SO<sub>2</sub>) 1-hour.

Despite these air quality improvements, there are plenty of opportunities to make environmental improvements and address challenges. The question is: what are the best means to achieve those gains? The major environmental statutes are ill-equipped to effectively solve environmental challenges the U.S. faces today and, in some instances, result in environmental degradation. The EPA has evolved into a vast command-and-control regulatory regime that impedes the flourishing of a free and vibrant society. The

<sup>3</sup>United States Environmental Protection Agency, "Overview of the Clean Air Act and Air Pollution," <https://www.epa.gov/clean-air-act-overview> (accessed February 25, 2017).

<sup>4</sup>United States Environmental Protection Agency, "Our Nation's Air: Status and Trends through 2015," <https://gispub.epa.gov/air/trendsreport/2016/> (accessed February 25, 2017).

EPA has used ever-expanding authority to implement stringent regulations with increasingly high compliance costs and diminishing marginal environmental returns. These environmental regulatory roadblocks impede infrastructure investment of all types, from roads and bridges to pipelines and transmission lines.

Alternatively, policymakers should not ignore the potential of economic freedom to improve environmental quality. Private property rights incentivize owners to take care of their belongings rather than abuse the land and water. A sound rule of law ensures that polluters cannot violate the rights of others without accounting for externalities or providing just compensation for any damage inflicted. Furthermore, as freer economies develop and become richer, they also tend to be more capable of adopting greater energy efficiency through innovation.

Policy reforms to America's major environmental statutes will not only yield better economic conditions, but also will more adequately protect public health and safety. As my colleague Diane Katz outlined in an environmental primer, policymakers should adhere to the following principles:

- **Shifting responsibility** for environmental regulation from the federal government to the states and the private sector.
- **Finding market alternatives** to command-and-control regulation, such as tradable permits for air emissions and water discharges.
- **Limiting congressional delegation** of regulatory authority.
- **Compensating citizens** for regulatory "takings." The benefits of environmental improvements are enjoyed by the public, but the regulatory costs are routinely imposed on individuals.
- **Codifying** stricter information quality standards for rulemaking, including limits on agency use of co-benefits to justify regulation.
- **Establishing a sunset date** for environmental regulations. To help ensure that obsolete and ineffective rules are taken off the books, sunset dates should be set for all major environmental regulations.
- **Restating and clarifying in law** that the Clean Air Act was never intended to regulate greenhouse gases as air pollutants, and declare in statute that greenhouse gases are not pollutants subject to regulation under the act.
- **Shifting federal land holdings** to states and the private sector.<sup>5</sup>

### **Reforming Environmental Roadblocks to Infrastructure Investment**

Obstruction to infrastructure investment exists at all levels of government, but several federal regulations delay and obstruct investment and job creation for negligible environmental benefit. Congress should examine and reform the following major environmental regulatory roadblocks to infrastructure investment.

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<sup>5</sup>Diane Katz, "An Environmental Policy Primer for the Next President," Heritage Foundation *Backgrounder* No. 3079, December 14, 2015, <http://www.heritage.org/environment/report/environmental-policy-primer-the-next-president>.

## NEPA

The National Environmental Policy Act (NEPA) requires federal agencies to conduct comprehensive environmental assessments for a wide range of projects, including permitting of infrastructure. The NEPA process commences when a federal agency proposes a major action that could significantly impact the environment. There are multiple steps in the NEPA process beginning with an environmental assessment as to whether the proposed action significantly affects the environment. Categorical exclusions may be granted, which effectively act as a NEPA waiver if it is determined to have no significant environmental impacts. Categorical exclusions do not require an environmental assessment or an environmental impact statement.<sup>6</sup>

Environmental stewardship is critical but the NEPA statute that is nearly fifty years old has evolved to serve more as a tool to delay and obstruct projects unpopular with judicially active special interest groups or biased politicians who ignore scientific and technical logic. In one instance, a mining company waited 17 years for a permit.<sup>7</sup> For highway projects, the average time to complete an environmental impact statement increased from 2.2 years in the 1970s to 8.1 years in 2011.<sup>8</sup> Currently, 148 energy and transit projects are in NEPA review at an estimated cost of nearly \$230 billion dollars.<sup>9</sup>

The Regional Plan Association identified a number of contributing factors to increased NEPA delays, which occur at the federal, state, and local level. Some of the major problems at the federal level include differing interpretations of NEPA requirements, failed interagency coordination, administrative bottlenecks, and outdated requirements that fail to take into account a dynamic, ever-changing environment.<sup>10</sup> Furthermore, the Council on Environmental Quality (CEQ) added steps agencies must adhere to when conducting environmental impact statements, layering more bureaucracy on an already cumbersome process. For example, the CEQ issued final guidance for how agencies should consider global warming impacts in their NEPA reviews, as negligible as they will be.<sup>11</sup>

The Obama Administration recognized that NEPA reviews can be expedited to speed up project investment without sacrificing the environment by effectively relinquishing NEPA requirements for

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<sup>6</sup>U.S. Department of Transportation Federal Highway Administration, Environmental Review Toolkit, "NEPA Documentation: Categorical Exclusion," <https://www.environment.fhwa.dot.gov/projdev/docuce.asp> (accessed February 23, 2017).

<sup>7</sup>Testimony of Laura Skaer, Executive Director, Northwest Mining Association, before the Committee on Resources, U.S. House of Representatives, NEPA Task Force, April 23, 2005, <http://www.nwma.org/Issues/NEPA%20Testimony.doc> (accessed February 23, 2017).

<sup>8</sup>Regional Plan Association, "Getting Infrastructure Going: Expediting the Environmental Review Process," June 2012, <http://www.rpa.org/library/pdf/RPA-Getting-Infrastructure-Going.pdf> (accessed February 23, 2017).

<sup>9</sup>Curtis Arndt, "Regulatory Burdens and the Supply of Infrastructure Projects," American Action Forum, February 23, 2017, <https://www.americanactionforum.org/research/infrastructure-regulatory-burdens/> (accessed February 27, 2017).

<sup>10</sup>Ibid.

<sup>11</sup>"Fact Sheet: White House Council on Environmental Quality Releases Final Guidance on Considering Climate Change in Environmental Reviews," The White House, August 2, 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/08/02/fact-sheet-white-house-council-environmental-quality-releases-final> (accessed February 6, 2017).

projects funded by the American Recovery and Reinvestment Act, better known as the stimulus package. The Administration granted more than 179,000 categorical exclusions for stimulus projects because, as then–Energy Secretary Steven Chu said, it was necessary to “get the money out and spent as quickly as possible” and “[i]t’s about putting our citizens back to work.”<sup>12</sup> The same logic applies to other publicly funded infrastructure projects as well as privately funded ones.

Both Congress and the CEQ have attempted to streamline the NEPA process. Most recently, the Fixing America's Surface Transportation Act or FAST Act expedites the environmental review for some large infrastructure projects, but several reforms lack the proper enforcement mechanisms, and the reforms fail to address the root problems of project delays.

Reforming or repealing NEPA will not compromise environmental stewardship but instead provide an opportunity to remove duplication with state environmental standards and establish efficient and effective means to protect public health and safety. With the exception of full repeal, reforms to NEPA should include:

- Eliminating greenhouse gas emissions analysis from the review process,
- Narrowing the review to only major environmental issues,
- Mandating time limits,
- Establishing functional equivalence of a NEPA analysis through federal and state statutes that already require an environmental impact analysis, and
- Requiring NEPA to incorporate previous analyses into similar projects.<sup>13</sup>

### **Social Cost of Carbon**

The federal government uses the social cost of carbon (SCC) to calculate the climate benefit of abated carbon dioxide emissions from regulations or the “climate cost” of infrastructure projects. When President Obama first took office, he created an Interagency Working Group to calculate the alleged monetary long-term damage of CO<sub>2</sub> emissions in a given year. A few years later, the working group increased that cost to \$36 per ton in 2015.

Not only is the analysis a waste of time and resources, federal and state regulators can use SCC to justify stalling or rejecting an infrastructure project. The agency estimates the amount of CO<sub>2</sub> that would be emitted into the atmosphere over the lifetime of that project, multiplies that figure by \$36, and generates a “global warming cost” to justify the obstructing the project. In fact, a Colorado judge

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<sup>12</sup>Kristen Lombardi and John Solomon, “Obama Administration Gives Billions in Stimulus Money Without Environmental Safeguards,” *The Washington Post*, November 28, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/28/AR2010112804379.html> (accessed February 6, 2017).

<sup>13</sup>Diane Katz and the Honorable Craig Manson, “The National Environmental Policy Act,” in The Heritage Foundation, *Environmental Conservation: Eight Principles of the American Conservation Ethic*, [http://thf\\_media.s3.amazonaws.com/2012/EnvironmentalConservation/Chapter5-The-National-Environmental-Policy-Act.pdf](http://thf_media.s3.amazonaws.com/2012/EnvironmentalConservation/Chapter5-The-National-Environmental-Policy-Act.pdf) (accessed February 23, 2017).

rejected a coal mine expansion because the regulators failed to take into consideration the social cost of carbon.<sup>14</sup>

The EPA uses three statistical models, known as integrated assessment models, to estimate the value of the social cost of carbon, which is defined as the economic damage that one ton of carbon dioxide emitted today will cause over the next 300 years. But these models are inadequate tools for policy analysis and regulatory rulemaking. Subjecting the models to reasonable inputs for climate sensitivity and discount rates dramatically lowers the figure for the social cost of carbon.

Discount rates are important to for projecting costs and benefits well into the future. People generally prefer benefits earlier instead of later and costs later instead of earlier. Hence, it is necessary to normalize costs and benefits to a common time. For example, if a 7 percent discount rate makes people indifferent to a benefit now versus a benefit later (e.g., \$100 today versus \$107 a year from now), then 7 percent is the appropriate discount rate to use. But discount rates also demonstrate how sensitive the social cost of carbon is to the discount rate.<sup>15</sup> For example, with regard to analyzing the Clean Power Plan climate regulations on existing power plants, when changed from a 3 percent discount rate to a 5 percent discount rate, the EPA's \$20 billion in projected climate benefits decreases to \$6.4 billion—less than the EPA's egregiously low projection of \$8.4 billion in compliance costs.

The models also rely on equilibrium climate sensitivity (ECS) to calculate the cost. ECS is an attempt to quantify the earth's temperature response to CO<sub>2</sub> emissions, answering the question: How does the earth's temperature change from a doubling of CO<sub>2</sub> in the atmosphere? Recent peer-reviewed literature estimates that the equilibrium climate sensitivity is lower than the studies the EPA relied on, which are now more than a decade old.<sup>16</sup> Using more up-to-date ECS literature also significantly lowers the value of SCC.<sup>17</sup> According to one model, using a 7 percent discount rate combined with more updated equilibrium climate sensitivity distribution decreases the SCC by \$34 per ton (more than a 102 percent decrease) and in some instances, has a high probability of being negative (meaning there is a social benefit of increased carbon dioxide emissions).<sup>18</sup>

Furthermore, attempts to forecast economic damages centuries into the future strains credibility when moving to the real world of policy implementation. These models are not credible tools for policy analysis. Congress and the Trump Administration should prohibit estimates of the social cost of carbon in any regulatory analysis.

## Nuisance Litigation

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<sup>14</sup>Phil Taylor, "BLM Crafting Guidance on Social Cost of Carbon—Internal Memo," Greenwire, April 15, 2015, <http://www.eenews.net/stories/1060016810> (accessed February 23, 2017).

<sup>15</sup>U.S. Environmental Protection Agency, *Regulatory Impact Analysis*, pp. ES-22, Table ES-9.

<sup>16</sup>Paul Knappenberger and Patrick Michaels, "Climate Models' Tendency to Simulate Too Much Warming and the IPCC's Attempt to Cover That Up," Cato Institute, October 10, 2013, <http://www.cato.org/blog/climate-models-tendency-simulate-too-much-warming-ipccs-attempt-cover> (accessed February 25, 2017).

<sup>17</sup>Kevin Dayaratna and David Kreutzer, "Unfounded FUND: Yet Another EPA Model Not Ready for the Big Game," Heritage Foundation *Backgrounder* No. 2897, April 29, 2014, [http://thf\\_media.s3.amazonaws.com/2014/pdf/BG2897.pdf](http://thf_media.s3.amazonaws.com/2014/pdf/BG2897.pdf).

<sup>18</sup>Ibid.

Another major hurdle to infrastructure development is nuisance litigation through citizen suit provisions in many of the major environmental laws. Groups can sue government agencies and others under citizen suit provisions where they believe laws like the Endangered Species Act and Clean Water Act have not been followed in permitting projects. These provisions have been abused because the consequences of suing are relatively small for plaintiffs compared to the outsized costs to companies and taxpayers for the resources diverted to excessive litigation and lost economic activity from legitimate projects that are objectionable to a small group of people. Extreme environmental organizations often use the courtroom as a “defeat by delay” strategy to make infrastructure projects so expensive and time consuming as to discourage investment or block legitimate activity altogether.

Ironically, nuisance litigation has also had costly environmental impacts in addition to unnecessarily complicating other activities. For example, the National Park Service (NPS) published a plan to manage flooding in the Yosemite Valley in 2000 after years of debate, only for two small environmentalist groups to sue in an attempt to prevent these management plans. After seven years of litigation, the courts finally permitted the NPS to proceed with a small portion of the plan that dealt with road repair and sewer pipes leaking into wetlands, work which was prevented to that point because of the ongoing lawsuits.<sup>19</sup>

Citizen suit provisions are an important piece of environmental laws. However, reform is necessary to prevent their abuse. Congress should clarify requirements for legal standing (such as requiring proof of a connection to and harm from the challenged action), and require bonds be posted by plaintiffs seeking to block activities in order to reduce abuse and curb defeat by delay tactics that harm private parties and taxpayers.<sup>20</sup>

### **The Endangered Species Act**

Environmental activists have used the Endangered Species Act (ESA) to block infrastructure and economic development across the country. For instance, environmental organizations used the American burying beetle to thwart the construction of the Keystone XL pipeline. The ESA has largely been an ineffective conservation tool, but the act has been effective in blocking economic development and creating perverse incentives and unintended consequences when landowners avoid dealing with endangered species.

The list of “endangered” and “threatened” species continues to grow in the United States and worldwide and has increased more than tenfold since the ESA’s creation in 1973. As of February 2017, Fish and Wildlife Service (FWS) reported 1,652 U.S. species on the list and another 676 foreign species.<sup>21</sup> Meanwhile, there are only 47 delisted species, because they have been “recovered,” a mere 2 percent

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<sup>19</sup>Allan K. Fitzsimmons, *Reforming Federal Land Management: Cutting the Gordian Knot* (Lanham, MD: Roman & Littlefield Publishers, Inc.), 2012, p. 4.

<sup>20</sup>Robert Gordon and Diane Katz, eds., *Environmental Policy Guide: 167 Recommendations for Environmental Policy Reform* (Washington, DC: The Heritage Foundation, 2015).

<sup>21</sup>U.S. Fish and Wildlife Services, Environmental Conservation Online System, Listed Species Summary (Boxscore), as of February 23, 2017, <http://ecos.fws.gov/ecp0/reports/box-score-report> (accessed February 24, 2017).

of all listed species. Furthermore, though the FWS lists 47 recovered species, it is a mistake to attribute all of their recoveries to the ESA. There have been reporting errors regarding population and population trends or other policy changes that resulted in species recovery.<sup>22</sup>

On the other hand, only 10 species listed are now extinct and therefore proponents of the ESA will argue that the act has commendably prevented extinction. As dubious as the results may be, clearly defined problems exist with the ESA as currently structured such as delayed economic investment, threatened private property rights, perverse incentives that destroy habitat protection, and the federal government's inability to quickly adapt to a constantly changing environment.

The unintended consequences created by the ESA have been documented for years. Plenty of anecdotal evidence exists where landowners have managed their land and destroyed habitats to avoid dealing with endangered species. Michael Bean of the Environmental Defense Fund identified this problem in a speech more than two decades ago saying that landowners' actions are "fairly rational decisions, motivated by a desire to avoid potentially significant economic constraints."<sup>23</sup> Several studies have examined landowners' preemptive habitat destruction. For instance, Dean Lueck of the Indiana University Maurer School of Law and Jeffrey A. Michael of Towson University and North Carolina State University examined individual forest plots occupied by red-cockaded woodpeckers. They found that private landowners logged timber that was close to colonies of the woodpeckers well before the timber mature so the birds could not nest, reducing the available habitat.<sup>24</sup>

Congress and the Trump Administration should implement wholesale reforms to the ESA. Structural reforms such as fixing the consultation process and ensuring compliance with relevant information quality guidelines would go a long way to reducing some of the bureaucratic obstacles, but Congress should also shift reliance and authority to the states. States have their own conservation programs and will be more effective managers because they are accountable to the people who will directly benefit from wise management decisions or be marginalized by poor ones.<sup>25</sup> Furthermore, Congress should explore ways to protect private property rights and incentivize conservation, which would yield better economic and environmental results.<sup>26</sup>

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<sup>22</sup>Jonathan Adler, "Perverse Incentives and the Endangered Species Act," Resources for the Future, August 4, 2008, <http://www.rff.org/blog/2008/perverse-incentives-and-endangered-species-act> (accessed February 27, 2017).

<sup>23</sup>Brian Seasholes, "Frequently Asked Questions on Endangered Species Act Reform," The Reason Foundation, October 28, 2014, <http://reason.org/studies/show/frequently-asked-questions-on-endan> (accessed February 24, 2017).

<sup>24</sup>Dean Lueck and Jeffrey A. Michael, "Preemptive Habitat Destruction Under the Endangered Species Act" (April 2000), <https://ssrn.com/abstract=223871> or <http://dx.doi.org/10.2139/ssrn.223871> (accessed February 24, 2017).

<sup>25</sup>Jack Spencer, Romina Boccia, and Robert Gordon, "Environmental Conservation Based on Individual Liberty and Economic Freedom," Heritage Foundation *Backgrounder* No. 2758, January 8, 2013, [http://thf\\_media.s3.amazonaws.com/2013/pdf/bg2758.pdf](http://thf_media.s3.amazonaws.com/2013/pdf/bg2758.pdf).

<sup>26</sup>Randy T. Simmons, "Property Rights and The Endangered Species Act," Institute for Research on the Economics of Taxation Studies in Social Cost, Regulation, and the Environment No. 9 (April 2002), <http://iret.org/pub/SCRE-9.PDF> (accessed February 24, 2017).

## Ozone Standards

In October 2015, the EPA set a new standard for ground level ozone (one of six major air pollutants regulated by the EPA) to nearing background levels; the standard is currently being contested by states in court. The EPA's more stringent ozone standard is a threat to publicly and privately funded infrastructure projects as it is expensive to meet tighter standards with smaller margins of tangible benefits. The new standards would have a direct, adverse impact on the construction of new industry, roads, and other infrastructure. Perhaps most oppressive are requirements for non-attaining regions to offset ozone-creating emissions from new or expanding industry with cuts in emissions elsewhere. Offsets turn economic growth into a zero-sum game and force investment away from non-attaining areas by making it harder to attract or expand new business.<sup>27</sup>

On behalf of its 6,000 member companies and organizations, the American Road and Transportation Builders Association warned of the negative impacts a more stringent standard would have on the "construction and maintenance of the nation's roadways, waterways, bridges, ports, airports, rail and transit systems."<sup>28</sup> Counties forced into non-attainment could lose transportation funding and the penalties could also adversely impact privately funded projects that require federal permit approvals.<sup>29</sup>

Even if the federal government does not implement automatic sanctions, conformity lapses also result in withdrawn funding or delay federal and non-federal infrastructure spending. A conformity lapse occurs when the Federal Highway Administration deems a transportation improvement plan (TIP) submitted by the metropolitan planning organization (MPO) to be insufficient in meeting the upward threshold of emissions.<sup>30</sup> As required by the Clean Air Act, MPOs must demonstrate their transportation plans conform to State Implementation Plans, which means "activities will not cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone."<sup>31</sup> Though certain projects are exempt from conformity and the EPA has implemented a grace period, more stringent standards present difficult compliance challenges and would likely increase

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<sup>27</sup>According to Michael Walls, Vice President of Regulatory and Technical Affairs for the American Chemistry Council, "Nonattainment areas are very difficult places to expand or improve business of any size, due to more expensive and restrictive regulations. It's likely that facilities would expand only if they shut down some part of their operation or they came up with some significant additional investment, or if they were required to buy increasingly expensive offsets." Frank DiCesare, "Lawmakers Tackled EPA Ozone Proposal," Frank DiCesare, "Lawmakers Tackled Ozone Proposal," *American Press*, August 23, 2014, <http://www.americanpress.com/news/local/Lawmakers-tackled-EPA-ozone-proposal> (accessed February 6, 2017).

<sup>28</sup>American Road and Transportation Builders Association, Comment to the Environmental Protection Agency, Re: National Ambient Air Quality Standards for Ozone, March 17, 2015, <http://www.artba.org/wp-content/uploads/2015/04/ARTBA-Comments-Re-Docket-No-EPA-HQ-OAR-2008-0699.pdf> (accessed February 26, 2017).

<sup>29</sup>The United States Chamber of Commerce, "Grinding to a Halt: Examining the Impacts of the New Ozone Regulations on Key Transportation Projects," <http://www.energyxxi.org/sites/default/files/Grinding-to-a-halt-9-18.compressed.pdf> (accessed February 27, 2017).

<sup>30</sup>James E. McCarthy, "Transportation Conformity Under the Clean Air Act," Congressional Research Service, May 21, 2015,

<sup>31</sup>U.S. Department of Transportation, Federal Highway Administration, Transportation Conformity Brochure, [https://www.fhwa.dot.gov/environment/air\\_quality/conformity/con\\_broc.cfm](https://www.fhwa.dot.gov/environment/air_quality/conformity/con_broc.cfm) (accessed February 27, 2017).

conformity lapses. Resolving conformity lapses are costly, time-consuming and divert infrastructure investment from where it may be most needed. For instance, Atlanta had to divert nearly \$700 million away from highway construction toward transit and bicycles to meet the emissions limits.<sup>32</sup>

National average ozone levels have fallen 32 percent since 1980 and are on track to continue decreasing.<sup>33</sup> Withdrawing the 2015 standard would unlock economic activity at the state and local level even as progress is made as states continue to meet attainments of the 1997 and 2008 standards.

### **Unleashing American Energy Potential Will Stimulate Infrastructure Investment**

Infrastructure spending needs are not limited to transportation and telecom infrastructure. Policymakers should not ignore opportunities to expand privately funded energy infrastructure investments. They should include reforms that eliminate open access to natural resource extraction, remove government-imposed obstacles that obstruct power generation, electricity grid modernizations, and export facility construction, as well as pipeline and transmission line expansion as part of any infrastructure package.

Opening access to resource exploration and implementing regulatory reform will spur private-sector investment in new infrastructure and spur job creation across the country. In fact, in 2011 the U.S. Chamber of Commerce compiled a list of 351 projects stalled by time-consuming permitting processes, unnecessarily slow environmental reviews, nuisance lawsuits, changes to zoning laws, and Not in My Back Yard (NIMBY) resistance. Although the study is a few years old, the long list of projects demonstrates the sheer magnitude of potentially lost economic opportunities for investments in energy infrastructure. The authors estimate that the “invest phase” of the projects, which includes planning and construction, would generate \$577 billion in direct investment over a 7-year construction period.

Importantly, regulatory reform will benefit all energy sources and technologies. Out of the 351 projects identified, 140 of the stalled projects are renewable energy infrastructure, including 89 wind power, 29 biomass, 10 solar power, seven hydropower, four wave, and one geothermal project. Oil and natural gas transportation and storage expansion presents another opportunity for increased direct investment in infrastructure. Despite the politicization of recent pipeline projects, such as Keystone XL and Dakota Access, pipelines are the safest mode of transporting oil, natural gas, and other petroleum products. The United States has more than 500,000 miles of crude oil, petroleum, and natural gas pipelines, and another 2 million miles of natural gas distribution pipelines.<sup>34</sup> Not only do pipelines pose the least threat to accidents, injuries, or fatalities, they also pose the smallest environmental risk.<sup>35</sup>

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<sup>32</sup> The United States Chamber of Commerce, “Grinding to a Halt: Examining the Impacts of the New Ozone Regulations on Key Transportation Projects,” <http://www.energyxxi.org/sites/default/files/Grinding-to-a-halt-9-18.compressed.pdf>

<sup>33</sup> U.S. Environmental Protection Agency, “Air Trends: Ozone Trends,” <https://www.epa.gov/air-trends/ozone-trends> (accessed February 6, 2017).

<sup>34</sup> Diana Furchtgott-Roth, “Pipelines Are Safest for Transportation of Oil and Gas,” Manhattan Institute *Issue Brief* No. 23, June 2013, [https://www.manhattan-institute.org/pdf/ib\\_23.pdf](https://www.manhattan-institute.org/pdf/ib_23.pdf) (accessed February 6, 2017).

<sup>35</sup> Ibid.

Oil and gas infrastructure includes more than pipelines, however. Rail and marine vessels are necessary and important modes of transport as is investment in new roads and road maintenance because of high-volume heavy-duty vehicle traffic. The increased oil and gas production as a result of the shale boom in the U.S. consequently increased infrastructure investment. According to a December 2013 analysis from IHS Economic Consulting, U.S. oil and gas infrastructure increased from \$56.3 billion in 2010 to \$89.6 billion in 2013.<sup>36</sup> The study projects a total of \$890 billion in direct investment for oil and gas infrastructure and storage over the 2014–2025 timeframe.<sup>37</sup>

The \$890 billion projection is for the business-as-usual case, assuming no significant changes in policy or regulation. Free-market reforms that open access to energy resources currently off limits and reduce duplicative and ineffective regulations that increase production costs would increase energy production and subsequently increase infrastructure investment. In fact, the IHS analysis projects that a 20 percent increase in oil and gas production from the baseline case would yield a total of \$1.15 trillion in oil and gas infrastructure and storage direct spending, a 29 percent increase, or an additional \$260 billion, over the baseline scenario.<sup>38</sup>

A 20 percent increase in resource production is by no means out of reach for American energy companies. Domestic petroleum production in 2015 was about 50 percent higher than the projection the Energy Information Administration (EIA) made for 2015 in 2008.<sup>39</sup> Natural gas production in 2015 was about 40 percent higher than the EIA's 2008 projection.<sup>40</sup> The comparative pessimism on the part of the EIA was largely due to not fully appreciating the impacts of smart drilling technology and hydraulic fracturing (fracking) at that time. Even at a time where oil prices are much lower than 2008, reforms that open access to untapped resources and reduce the regulatory burden on oil and gas activities could achieve a 20 percent increase (or higher) in production.

## Energy Reforms

Reforming obstructionist federal laws and regulations that are duplicative to state regulations, provide little to no environmental benefit, or serve as a guide to filing lawsuits will encourage more infrastructure investment. State and local laws and regulations that also contribute to delays in investment and policy reform at all levels of government should follow the same themes. The environmental review and permitting process of infrastructure projects should respect the rule of law and protect private property rights, not serve as tools for anti-development and litigation.<sup>41</sup>

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<sup>36</sup>IHS Global Inc., "Oil and Natural Gas Transportation and Storage Infrastructure: Status, Trends, and Economic Benefits," December 2013, <http://www.api.org/~media/Files/Policy/SOAE-2014/API-Infrastructure-Investment-Study.pdf> (accessed February 6, 2017).

<sup>37</sup>Ibid.

<sup>38</sup>Ibid.

<sup>39</sup>U.S. Energy Information Administration, "Annual Energy Outlook 2008," June 2008, <https://www.eia.gov/oiaf/archive/aeo08/index.html> (accessed June 20, 2016), and U.S. Energy Information Administration, "Annual Energy Outlook 2016," July 7, 2016, <http://www.eia.gov/forecasts/aeo/> (accessed February 6, 2017).

<sup>40</sup>Ibid.

<sup>41</sup>Steve Pociask and Joseph P. Fuhr Jr., "Progress Denied: A Study on the Potential Economic Impact of Permitting

Policymakers should address the following to increase resource exploration and production, which will consequently spur more privately funded energy infrastructure investment.

### **Open Access to Domestic Resource Production**

A critical component to achieving increased domestic energy production is to open access to onshore and offshore resources restricted by the federal government. The Trump Administration should open all federal waters and federal lands that are not part of the national park system or congressionally designated wilderness areas to exploration and production for all of America's natural resources.

Rather than abiding by antiquated five-year leasing programs that are inflexible to constantly changing market dynamics, Congress should require the Department of the Interior to conduct lease sales if the private sector can safely pursue energy exploration and production. Congress and the Administration could also streamline the permitting and environmental review processes and limit judicial activism, but the most appropriate reform that would yield more effective results for both energy production and environmental stewardship is to transition management authority of resource development on federal lands to the states.<sup>42</sup>

In fact, Heritage analysis shows that lifting needless and duplicative restrictions on energy production will increase employment by an average of 700,000 jobs through 2035. Along with the jobs comes \$3.7 trillion in additional gross domestic product (GDP) that translates to an additional \$40,000 of income per family of four by 2035.<sup>43</sup>

### **Approve the Keystone XL Pipeline and Streamline Pipeline Infrastructure Permitting**

The recent growth in domestic oil and gas production—sometimes in nontraditional areas, such as North Dakota—has resulted in transportation delays. Expanding natural gas distribution and exporting more natural gas, whether it is to Mexico, Canada, or elsewhere, also will necessitate additional pipeline infrastructure.<sup>44</sup>

The Trump Administration's easiest decision may be to approve the Keystone XL pipeline. Keystone XL is environmentally responsible, will not contribute significantly to climate change, will boost the economy, will increase the supply of oil to America's Gulf Coast refineries, and will provide much needed energy

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Challenges Facing Proposed Energy Projects," U.S. Chamber of Commerce, March 10, 2011, [http://www.projectnoproject.com/wp-content/uploads/2011/03/PNP\\_EconomicStudy.pdf](http://www.projectnoproject.com/wp-content/uploads/2011/03/PNP_EconomicStudy.pdf)

<sup>42</sup>Katie Tubb and Nicolas Loris, "The Federal Lands Freedom Act: Empowering States to Control Their Own Energy Futures," Heritage Foundation *Backgrounder* No. 2992, February 18, 2015, <http://www.heritage.org/environment/report/the-federal-lands-freedom-act-empowering-states-control-their-own-energy-futures>.

<sup>43</sup>David Kreutzer, Nicolas Loris, and Kevin Dayaratna, "Time to Unlock America's Vast Oil and Gas Resources," Heritage Foundation *Backgrounder* No. 3148, September 1, 2016, <http://www.heritage.org/environment/report/time-unlock-americas-vast-oil-and-gas-resources>.

<sup>44</sup>U.S. Energy Information Administration, "Natural Gas Explained: Natural Gas Pipelines," U.S. Department of Energy, November 30, 2015, [http://www.eia.gov/energyexplained/index.cfm?page=natural\\_gas\\_pipelines](http://www.eia.gov/energyexplained/index.cfm?page=natural_gas_pipelines) (accessed February 6, 2017).

infrastructure. The Trump Administration invited TransCanada, the builder of the pipeline, to re-apply for a permit

Streamlining the environmental review and permitting processes for new pipelines will ensure timely, economically rational and environmentally responsible infrastructure investment. However, taxpayers should not subsidize those investments, and Congress should eliminate any federally imposed cost-socialization requirements through which regulatory agencies support expensive, uneconomic projects by spreading the costs to citizens who derive little, if any, benefit from those projects. Additionally, Congress should be mindful of protecting private property rights and respect the state authority to control local and regional needs.

### **Re-engage Yucca Mountain**

Nuclear power provides 20 percent of the nation's electricity. The nuclear industry provides thousands of jobs and billions of dollars in economic activity, including exports. However, political mishandling of nuclear waste management is a major barrier to the current and future nuclear industry, as well as timely management of defense-related waste.<sup>45</sup>

The federal government has devoted significant resources to a long-term repository at Yucca Mountain, which the Obama Administration tried to close for political reasons rather than safety or technological objections. The Trump Administration should fund and extend the key license support contracts to complete its review of the Yucca Mountain facility. Funds currently exist for this purpose, paid for by nuclear power utilities and their rate payers in the Nuclear Waste Fund which currently has \$37.4 billion available to be appropriated for nuclear waste management.<sup>46</sup>

Regardless of what ultimately becomes of Yucca Mountain, the scientific community and global experience have supported deep geologic storage as critical to any waste management plan.<sup>47</sup> Congress and the Trump Administration should then address fundamental problems with the current approach to management, in particular including establishing industry responsibility for managing waste, competitive pricing, and giving Nevadans more control over any nuclear waste facility there.<sup>48</sup>

### **Expand Access to Energy Exports**

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<sup>45</sup>Katie Tubb and Jack Spencer, "Real Consent for Nuclear Waste Management Starts with a Free Market," Heritage Foundation *Backgrounder* No. 3107, March 22, 2016, <http://www.heritage.org/research/reports/2016/03/real-consent-for-nuclear-waste-management-starts-with-a-free-market>.

<sup>46</sup>Office of Inspector General, "Department of Energy Nuclear Waste Fund's Fiscal Year 2016 Financial Statement Audit," U.S. Department of Energy, Audit Report OAI-FS-17-04, December 2016, p. 10, <https://energy.gov/sites/prod/files/2016/12/f34/OAI-FS-17-04.pdf> (accessed February 6, 2017).

<sup>47</sup>Jack Spencer and Nicolas Loris, "Yucca Mountain Remains Critical to Spent Nuclear Fuel Management," Heritage Foundation *Backgrounder* No. 2131, May 1, 2008, [http://www.heritage.org/research/reports/2008/05/yucca-mountain-remains-critical-to-spent-nuclear-fuel-management?\\_ga=1.263318668.1261244218.1479835039](http://www.heritage.org/research/reports/2008/05/yucca-mountain-remains-critical-to-spent-nuclear-fuel-management?_ga=1.263318668.1261244218.1479835039).

<sup>48</sup>Jack Spencer, "Nuclear Waste Management: Minimum Requirements for Reforms and Legislation," Heritage Foundation *Issue Brief* No. 3888, March 28, 2013, <http://www.heritage.org/environment/report/nuclear-waste-management-minimum-requirements-reforms-and-legislation>.

Congress and the Trump Administration should remove government impediments to liquefied natural gas (LNG) exports and coal export terminals. Regarding LNG exports, companies must obtain approval from both the Federal Energy Regulatory Commission and the Department of Energy (DOE) before exporting natural gas. A facility is automatically authorized if the recipient country has a free trade agreement (FTA) with the U.S. In the absence of an FTA, the DOE can arbitrarily deny a permit if it believes the volume of natural gas exports is not in the public's interest.<sup>49</sup> The decision to export natural gas should be a business decision, not a political one. The U.S. trades regularly with a number of non-FTA countries, and natural gas should be treated like any other globally traded good.

With respect to coal, export terminals should go through the proper environmental review and permitting stage, but opponents of coal production want the Army Corps of Engineers to consider a cumulative, programmatic environmental impact statement (EIS). This comprehensive review would assess the environmental impacts and greenhouse gas emissions not only from the actual terminal, but also from the mining, rail transportation to the terminal, and end use of the coal. Adding these extra layers of regulatory review would create more fodder for groups that want the coal to stay in the ground, and it sets a dangerous precedent for exports of goods and services that environmental activists feel have too large of an environmental footprint. The Trump Administration should prohibit agencies from conducting cumulative EISs.

## **Conclusion**

Whether it is traditional infrastructure or energy infrastructure, these shovel-ready job projects should not be held up for years in regulatory paralysis or through litigation. Any infrastructure proposal must come with substantial regulatory environmental reform. Reforming environmental regulations with a focus on transitioning authority to the states, creating market incentives, and removing costly, ineffective regulations will improve the environment at a lower cost.

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<sup>49</sup>Nicolas D. Loris, "Energy Exports Promote Prosperity and Bolster National Security," Heritage Foundation *Backgrounder* No. 2931, July 23, 2014, <http://www.heritage.org/research/reports/2014/07/energy-exports-promote-prosperity-and-bolster-national-security>.