

Written Testimony of John Thompson
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before the
U.S. House Subcommittee on Energy and Power
on "American Energy Initiative" H.R. 6172

Thursday September 20, 2012

Summary

My testimony makes several points:

About CCS

- Captured CO₂ has new importance in developing domestic oil supplies through enhanced oil recovery (EOR)
- Several coal plants (either under construction or in advanced development) would meet USEPA's proposed CO₂ emission limits using CCS. They would also use captured CO₂ for EOR.

About Performance Standards

- CO₂ performance standards are needed to gain state public service commission approval for coal CCS projects that would be added to a utility's rate base.
- USEPA considered technical feasibility and cost of CCS in its draft rule. They concluded that CCS was technically feasible for new coal plants, and addressed cost in the proposed rule by establishing reasonable emission limits, providing flexibility in how standards could be met by new plants, and by allowing extended compliance deadlines.
- Recently finalized Canadian emission limits for coal plants (new and existing) are set on the same bases as the US EPA standards and are similar to USEPA's proposed rules in emission limits and flexibility.

About H.R. 6172

H.R. 6172 would create regulatory confusion that would contribute to the following problems:

- Delay new coal plants (with and without CCS) because H.R. 6172 creates additional uncertainty about future regulations. Contrary to the intentions of the bill's sponsors, this regulatory confusion will favor natural gas plants not coal.
- Delay U.S. domestic oil production through EOR. There is a need for CO₂ from industrial sources to expand domestic oil production. Performance standards, coupled with incentives to lower capture costs, can drive greater domestic oil production.
- Replaces long-standing precedent promoting technology advancement that has achieved significant public health and environmental benefits, with a static, backward looking approach that only considers what is already achieved.
- Significantly delay the nation's ability to get CO₂ emissions from the largest stationary CO₂ sources in the United States.

Congress should focus on solutions that can achieve meaningful reductions in CO₂ emissions from the power sector – which is the largest source of domestic CO₂ emissions -- and at the same time can expand domestic oil production in existing basins, using EOR. EPA's proposed performance standards, coupled with an expanded program of incentives to drive EOR using CO₂ captured from fossil EGUs could achieve cost-effective reductions in the CO₂ emissions causing climate change from the industry most responsible for those emissions. At the same time, the standards can have the added economic benefit of supporting domestic oil production through enhanced oil recovery (EOR). H.R. 6172 would not achieve either goal, and would only create new problems.

Introduction

Thank you for this opportunity to testify on H.R. 6172, the “American Energy Initiative.” My name is John Thompson. I direct the Fossil Transition Project of the Clean Air Task Force (CATF). The Clean Air Task Force is a non-profit environmental group headquartered in Boston Massachusetts and with offices in Beijing, Illinois, Ohio, Washington DC, Texas, and New Hampshire and Maine. Our mission is to reduce the air pollutants associated with climate change and premature death and disease. We work throughout the United States and China on these issues. The Fossil Transition Project that I direct works to shift fossil fuels use to technologies that have less impact on the environment.

Worldwide fossil use, especially coal, will increase dramatically in the coming decades as the standard of living in developing nations improves. Increasing energy efficiency, greater use of renewables, and nuclear will displace some of the CO₂ emissions associated with this projected growth in fossil use, but any meaningful climate action must include widespread use of carbon capture and storage (CCS). CCS is the only technology that can remove up to 90% of the carbon dioxide from large stationary sources. Without CCS, it will be difficult if not impossible to avoid the worst aspects of climate change.

The Clean Air Task Force is committed to finding ways to advance CCS deployment. Our organization has filed comments in support of air permits for coal plants with CCS, advocated for coal projects that use advanced technology before state public service commissions, worked to promote incentives for CCS and EOR, supported regulations that

establish CO₂ emission limits that enable CCS, and promoted partnerships between US and Chinese companies that would lower CCS costs and encourage CCS projects in both countries.

I also serve on the National Coal Council. The National Coal Council advises DOE on coal-related topics. Our organization has published numerous reports on coal, including “Coal Without Carbon: An Investment Plan for Federal Action.”

My testimony today will share information on several topics, including EOR, CCS projects, USEPA’s rule, and use this information to offer opinions on H.R. 6172.

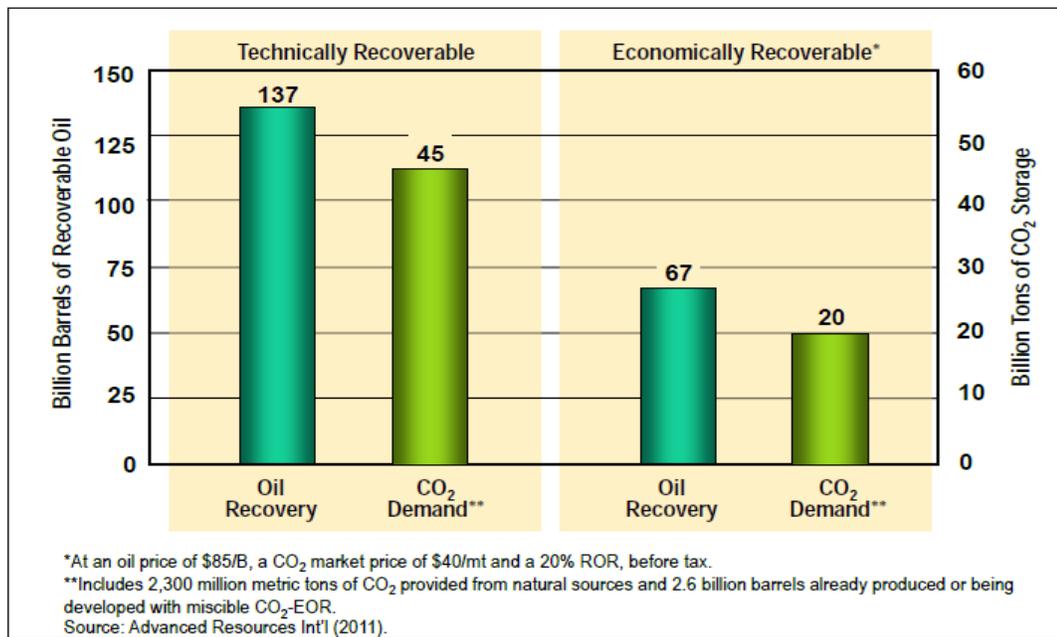
Carbon Capture and Storage (CCS) and Enhanced Oil Recovery (EOR)

CCS consists of three separate technologies: Capture, clean-up and compression of CO₂ that result from the use of coal in a power plant, transport through pipeline, and storage into either depleted oil fields for use in EOR or injection into saline aquifers deep below the ground. All of these components have been used at scale for long-time periods, often in other industries besides power generation.

The value of CCS, however, goes beyond reducing CO₂ emissions for the purposes of preventing climate change. Capture CO₂ from industrial and power plant sources could be used to expand domestic oil production through EOR. Currently, EOR accounts for 6% of domestic oil production. But with additional supplies of carbon dioxide, more oil could be produced from domestic oil wells.

U.S. Department of Energy estimates that approximately 137 billion barrels of domestic oil are technically recoverable through EOR, and of this amount, 67 billion barrels of oil are economically recoverable at an oil price of \$85 per barrel, a CO₂ market price of \$40 ton, and a ROR of 20%.¹ To produce 67 billion barrels of oil would use approximately 20 billion tons of CO₂, an amount equivalent to thirty years of CO₂ emissions from 93 GWs of coal plants or about 1/3 of the U.S. coal fleet.

Figure II-4. Domestic Oil Supplies and CO₂ Demand (Storage) Volumes from “Next Generation” CO₂-EOR Technology**



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EOR represents a substantial opportunity to both reduce carbon dioxide emissions from the power sector that contributes to climate change and use that CO₂ to replace foreign oil with domestic oil supplies. Only about 2 billion of tons of CO₂ are presently available from existing natural and traditional anthropogenic sources, which leaves an

¹ NETL, *Improving domestic energy security and lowering CO₂ emissions with "next generation" CO₂ enhanced oil recovery* (2011) (Available at http://www.netl.doe.gov/energy-analyses/pubs/storing%20co2%20w%20eor_final.pdf). Attached as Exh.III-77.

additional demand and storage capacity for approximately 18 billion metric tons for next-generation EOR in the main pay zones of oil formations. The most recent report by the National Coal Council cites new studies relating to residual oil zones that indicate CO₂ could help produce an additional 33 billion barrels of oil, requiring an additional 13 billion tons of CO₂². Taken together, these projections indicate that an estimated 31 billion additional metric tons of CO₂ is needed in order to produce 100 billion barrels of oil in the US . In total, this is roughly equivalent to the capture of the emissions from 165 GW of coal-fired power plant over a 30-year period.

The challenge then, is to find ways to capture CO₂ from power plants that accomplishes both goals. Performance standards such as the ones USEPA has proposed, together with potentially self-financing tax incentives for CO₂, EOR incentives, can help meet this need.

Several coal plants are proposed or under construction that show the feasibility of CCS at scale, meet USEPA's proposed 1,000 lb CO₂/MWh emission standard for fossil plants, and use captured CO₂ for EOR. The plants include:

Mississippi Power's Plant Ratcliffe in Kemper County, MS

This 582 MW Integrated Gasification Combined Cycle (IGCC) plant began construction in December 2010 and is expected to go into operation in 2014. It will gasify lignite. The plant will capture 65% of the CO₂ emissions and sell them for use

² "Harnessing Coal's Carbon Content, to Advance, the Economy, Environment, and Energy Security", National Coal Council, June 22, 2012.

in EOR. The Clean Air Task Force estimates that the CO₂ emissions from the Kemper County EGU facility will be approximately 786 pounds CO₂ per MWh (net), equivalent to 541 pounds CO₂ per MWh (gross), and well below the proposed performance standard.³

When Southern Company's Mississippi Power Company subsidiary won approval from the Mississippi Public Service Commission to build the 522 MW Kemper County IGCC power plant with 65% CCS, its senior executives testified that decades of industrial gas capture experience with Selexol™ was an important factor for the Mississippi Public Service Commission to use in assessing risk. Thomas O. Anderson, Vice President, Generation Development for Mississippi Power, testified that:

The carbon capture process being utilized for the Kemper County IGCC is a commercial technology referred to as Selexol™. The Selexol™ process is a commercial technology that uses proprietary solvents, but is based on a technology and principles that have been in commercial use in the chemical industry for over 40 years. Thus, the risk associated with the design and operation of the carbon capture equipment incorporated into the Plant's design is manageable.⁴

Also, Kimberly D. Flowers, Vice President and Senior Production Office of Mississippi Power Company, testified that "[t]he carbon capture process design proposed for this Project has been in commercial use in the chemical industry for

³ According to Mississippi Power Company filings before the Mississippi Public Service Commission the net output of the Kemper IGCC facility (when not using natural gas-fired duct burners) will be 522 MW and there will be 237 MW of auxiliary loads, implying a gross output of 759 MW derived from coal. CO₂ emissions are expected to be 1.6 million short tons per year, at 89% capacity factor. This implies an average emission rate of 786 lb per MWh (net), equivalent to 541 lb per MWh (gross). See MPSC Docket No, 2009-UA-0014, MPCo response to Boston Pacific data request of December 15, 2009, items 3-35 and 3-50 and 3-53.

⁴ Mississippi Power Company, MS Public Service Commission Docket 2009-UA-14, Phase Two Direct Testimony of Thomas O. Anderson, Page 22, filed December 7, 2009.

decades. Thus, the risk associated with the design and operation of the carbon capture equipment incorporated in the Plant's design is "manageable."⁵

In a 2011 analysts briefing, Mississippi Power Company President and CEO Ed Day and Executive Vice President, Engineering and Construction Penny Manuel concluded that the Kemper IGCC posed no construction risks that were materially different than other major construction projects including scrubber additions to existing power plants or new builds to the company's natural gas combined cycle fleet. These conclusions are shown in the final slide of their presentation, reproduced below:⁶

⁵ Mississippi Power Company, MS Public Service Commission Docket 2009-UA-14, Direct Testimony of Kimberly D. Flowers, page 42, filed January 16, 2009.

⁶ Day, E. and Manuel, P, *Plant Ratcliffe Update*, available at http://files.shareholder.com/downloads/SO/0x0x448822/cc532fc1-beb9-4af2-b48f-f9619ffb918d/Plant_Ratcliffe_Update.pdf,

Scale of Construction Comparison

	Scherer Units 1-4 FGD, SCR, and Baghouse	McDonough Unit 4,5,6 CC	Ratcliffe IGCC Unit 1
MWs	3,400	2,520	580
Craft Work (hrs)	13,500,000	4,500,000	8,000,000
Concrete (yds ³)	90,000	52,000	70,000
Steel (tons)	71,000	7,000	32,000
Piping (LF)	420,000	370,000	600,000
Site Grading (yds ³)	2,600,000	750,000	3,500,000

Construction risk for IGCC is not materially different from any other major construction project



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Summit Power's Texas Clean Energy Plant, Odessa TX

The Texas Clean Energy Plant is a 400 MW (gross) polygen plant that will gasify Powder River Basin coal to produce three products: 1) Approximately 200 MW of power, 2) 700,000 tons per year of urea fertilizer, and 3) 2.5 million tons of CO₂ for use in producing 7 million barrels/year of oil. The plant will capture 90% of the CO₂ that is produced. The project has sold all of its output, obtained all permits, ordered major equipment, and is expected to formally break ground in early 2013. The plant will go into operation in 2017. The company's president, Eric Redman, stated in May of this year that "CO₂ emissions would amount to about 200 pounds per MWh,

making the Texas plant far more climate-friendly than even the best combined-cycle natural-gas plants, which emit about 850 to 1,000 pounds per MWh.”⁷

According to a February 2012 announcement by Summit Power Group, the Texas Clean Energy Project will have "firm-price, turnkey EPC [engineering-procurement-construction] contracts that guarantee price, schedule and performance for the integrated coal gasification combined cycle (IGCC) project' and "a separate, 15-year O&M [operation and maintenance] contract...for the complete, turnkey operation and maintenance of the entire 600-acre facility, including day-to-day operation, and short term and long term maintenance.”⁸

Both Plant Ratcliffe and the Texas Clean Energy Project have received incentives that helped with facility financing. Plant Ratcliffe was awarded a \$270 million grant from the Department of Energy (DOE) and \$133 million in investment tax credits plus a federal loan guarantee. The Texas Clean Energy Project received a \$450 million grant from the DOE and also a number of state and federal tax benefits.

CO₂ Performance Standard for Fossil Power Plants

After the West Virginia Public Service Commission rejected the expansion of the Mountaineer CCS project, Mike Morris, CEO of AEP, stated:

⁷ Summit Power, Latest News, at <http://www.summitpower.com/in-the-news/can-environmentalists-learn-to-love-a-texas-coal-plant/>, citing *Can Environmentalists Learn To Love a Texas Coal Plant?*, Yale Environment 360 (May 31, 2012).

⁸ See <http://www.texascleanenergyproject.com/2012/summits-texas-clean-energy-project-reaches-major-milestone-with-signed-epc-and-om-contracts> (emphasis added).

We are clearly in a classic ‘which comes first?’ situation,” Morris said. “The commercialization of this technology is vital if owners of coal-fueled generation are to comply with potential future climate regulations without prematurely retiring efficient, cost-effective generating capacity. ***But as a regulated utility, it is impossible to gain regulatory approval to recover our share of the costs for validating and deploying the technology without federal requirements to reduce greenhouse gas emissions already in place.*** The uncertainty also makes it difficult to attract partners to help fund the industry’s share (emphasis added).⁹

Properly developed, performance standards play a key roll in helping CCS projects get placed in the rate base of utilities. The Mountaineer experience suggests that absent rules that require CCS, it is very hard to win approval for pollution control equipment from state public service commissions.

Furthermore, our experience with sulfur dioxide scrubbers indicate that setting performance standards plays a major role in reducing technology costs – a step which is important for CCS deployment both in the US and in rapidly developing countries like China and India. Research by Carnegie-Mellon University concluded that NSPS and best available control technology (BACT) permitting requirements for sulfur dioxide scrubbers, in combination with public R&D investments, dropped the capital cost of the technology two-fold from 1975 through 1995¹⁰. This reduction in cost was driven by a traversing the technology learning curve through deployment (165MWe deployed), a burst of investment in innovation during this period (as measured by patent filings), and an 8-fold increase in R&D collaborations.

USEPA, in my opinion, has done a good job in developing a proposed set of CO₂ performance standards for fossil fuel power plants through its NSPS authority. The proposed rules help advance CCS projects, signal that CCS is a certainty in a way that will boost EOR, help reduce costs, and begins the much needed process of bringing CO₂ emissions from the power sector down to combat climate change.

⁹ See “AEP Places Carbon Capture Commercialization On Hold, Citing Uncertain Status Of Climate Policy, Weak Economy” at <http://www.aep.com/newsroom/newsreleases/?id=1704>

¹⁰ “Regulation as the Mother of Innovation: The Case of SO₂ Control”, Taylor, Rubin, and Hounshell. Law & Policy, Vol. 27, No. 2, April 2005

In considering CCS as part of its proposed rules, EPA concluded that CCS is “technologically feasible for implementation at new coal-fired power plants, and its core components (CO₂ capture, compressions, transportation and storage) have already been implemented at commercial scale.” 77 Fed. Reg. at 22,414/3. On its own record USEPA reached four conclusions:

1. CCS is technologically achievable for implementation at new coal-fired power plants and its core components (CO₂ capture, compression, transportation and storage) are commercially available.¹¹
2. There is reason to expect that the costs of CCS will decrease over time, and in any event, economic subsidies for CCS, as for other energy systems and new control technologies are not an unusual condition.¹²
3. USEPA expects construction of no more than a few new coal-fired power plants by 2020 and that CCS is “feasible and sufficiently available for the expected number of coal plants, based on a 30-year averaging compliance path.”¹³

¹¹ 77 Fed. Reg. at 22,415-16, 22,418, & n.56. (citing DOE/NETL Carbon Dioxide Capture and Storage RD&D Roadmap, U.S. Department of Energy National Energy Technology Laboratory (December 2010)) (attached as Exh. III-4); see also *Summary of Interagency Working Group Comments on Draft Language*, Docket Id. No. EPA-HQ-OAR-2011-0660-0030 at 1.

¹² 77 Fed. Reg. at 22,418/3, nn. 57-58 (citing John M. Dutton and Annie Thomas, "Treating progress Functions as a Managerial Opportunity," 2, 235-247; Dennis Epple, Linda Argote, and Rukmini Devadas, "Organizational Learning Curves: A Method for Investing Intra-plant Transfer of Knowledge Acquired Through Learning by Doing," *Organizational Science*, Vol. 2, No. 1, February 1991; International Energy Agency, *Experience Curves for Energy Technology Policy*, 2000; and Paul L. Joskow and Nancy L. Rose, "The Effects of Technological Change, Experience, and Environmental Regulation on the Construction Cost of Coal-Burning Generating Units," *RAND Journal of Economics*, Vol. 16, Issue 1, 1-27, 1985. See discussion in "The Benefits and Costs of the Clean Air Act from 1990 to 2020," U.S. EPA, Office of Air and Radiation, April 2011; Ruben, E.S.; Yeh, S.; Antes, M.; Berkenpas, M.; Davison J.; "Use of experience curves to estimate the further cost of power plants with CO₂ capture," 1 *Intl. J. of Greenhouse Gas Control*, 188 (2007)).

¹³ 77 Fed. Reg. at 22, 414/1 (Noting that EPA used the Integrated Planning Model (IPM), Docket ID No. EPA-HQ-OAR-0660-0060, for projected new coal plant construction, keyed to the Annual Energy Outlook (AEO) and showing a pattern of little future construction of new coal-fired plants); see also *id.* n.46 (citing <http://www.epa.gov/airmarkets/progsregs/epa-ipm/BaseCasev410.html#documentation>); *id.* at 22,418 -22,419 (noting that EPA identifies

4. Several states already have set emission standards that make implementation of CCS necessary for the development of new coal-fired power plants.¹⁴

USEPA also recognized that natural gas is much less expensive than coal for new power generation, even if CO₂ emission limits are not established. The USEPA noted:

“Because of the economics of the energy sector, the EPA and others project that NGCC will be the predominant choice for new fossil fuel-fired generation even absent this rule. In its base case analysis, the EPA does not project any new coal-fired EGUs without CCS to be built in the absence of this proposal through 2030. New coal-fired or pet coke-fired units could meet the standard either by employing carbon capture and storage (CCS) of approximately 50% of the CO₂ in the exhaust gas at startup, or through later application of more effective CCS to meet the standard on average over a 30- year period. The 30-year averaging option could also provide flexibility for owners and operators of coal or pet coke units implementing CCS at the outset of the unit’s operation that were designed and operated to emit at less than 1,000 lb CO₂/MWh to address startup concerns or short term interruptions in their ability to sequester captured carbon dioxide.”¹⁵

USEPA’s regulatory approach does several important things. First, it addresses the large CO₂ emissions of the power sector. The US needs to transform the energy sector so that it emits much less CO₂. It sends a strong regulatory signal while also promoting technology innovation. H.R. 6172, however, looks backward. It replaces long-standing precedent promoting technology advancement that has achieved significant public health and environmental benefits and lowered costs, with a static, backward looking approach that only considers what technology has achieved in the past.

CCS as a compliance option based in part on the expectation that it will cost less in the future).

¹⁴ 77 Fed. Reg. at 22,414/2 (*citing* California Senate Bill 1368 (2006), Washington Senate Bill 6001 (2007), and Oregon Senate Bill 101 (2009)) (Attached as Exh. III-5).

¹⁵ 77 Fed. Reg. Page 22392

The “economic feasibility” of a technology cannot be considered in a vacuum as I believe H.R. 6172 does. In particular, asking for a determination about whether CCS is economically feasible before considering the details, design and probable effect of specific regulatory drivers for innovation puts the cart before the horse. That’s because CCS economic feasibility is not simply a function of capital and energy costs, but is very dependent on capture levels, flexibility in regulatory approach, and compliance time. USEPA addressed CCS cost issues in the proposed rule through several means, including: 1) establishing reasonable emission limits that reflect partial capture (50-65%) rather than full capture (90%); 2) Flexibility in how standards could be met by new plants, and 3) Longer time periods to meet compliance with the standard. The approach and rules EPA has proposed to address CO₂ emissions from new fossil power plants are reasonable.

The approach taken by Canada for establishing performance standards for coal plants is similar to that developed by USEPA. On September 12, 2012, Canada’s Minister for the Environment published final CO₂ performance standards applicable to both new coal-fired EGUs and to coal-fired units that have reached the end of their useful lives.¹⁶ The standard, promulgated under the Canadian Environmental Protection Act of 1999, is set at an emissions rate of 420 metric tons per gigawatt hour (“GW-hr”), a rate equivalent to 925.10 lbs/MWh (partial net),¹⁷ comparable to USEPA’s proposal. The Canadian rule, like

¹⁶ See *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations*, SOR/2012-167 §§ 3(1), 2 (definitions of “old unit” and “useful life”), 146 C. Gaz. II, 19 (Sept. 12, 2012); available at: <http://www.gazette.gc.ca/rp-pr/p2/2012/2012-09-12/html/sor-dors167-eng.html>

¹⁷ At a rate of 2.205 lbs/kg, and given that 420 metric tons = 420,000 kg, 420 metric tons/GW-hr is equivalent to 926,100 lbs/GW-hr, or 926.10 lbs/kW-hr. This rate is “partial

USEPA's proposal, provides flexibility. It contemplates that plants may use CCS (and that carbon dioxide might be used for EOR) and provides that a plant owner may apply for an extension, up to 2025 or 2030 depending upon the age of the plant, to comply with the standard.

Public materials issued with the Canadian rule note further the economic benefits expected to be realized from it: "It is estimated that Canadians will be better off by \$7.3 billion [Canadian] as a result of these regulations due to avoided costs associated with climate change and electricity generation, and avoided health problems from smog and air pollutants. There are also large benefits from the use of carbon capture and storage technology in which captured CO₂ is used for enhanced oil recovery."¹⁸

About H. R. 6172

H.R. 6172 would prohibit the US Environmental Protection Agency (USEPA) from finalizing any rule that establishes CO₂ emissions limits on any coal, gas or oil-fired power plant unless and until three out of four non-EPA officials publish in the Federal Register and submit a report to Congress that finds carbon capture and storage (CCS) is "technically and economically feasible."

H.R. 6172 suffers from a central problem. It places so-called "technical feasibility" and "economic feasibility" at the threshold of the standard setting decision process, and

net" because it is based on total gross electricity produces less electricity used to capture (but not pressurize) the carbon dioxide. Canadian Rule, §19(1).

14. Questions and Answers: Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations, available at:

<http://www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=4D34AE9B-1768-415D-A546-8CCF09010A23> (last viewed September 14, 2012).

in so doing it stymies innovation and maintains only the status quo. As I described earlier in my testimony, the question of technical and economic feasibility for CCS (or any other pollution control) has mostly to do with how deep are the required reductions, how fast they are required to occur, and how flexible are the options for meeting them. These considerations are purely regulatory, and any determination of feasibility must be made in the context of a proposed regulation. Furthermore, the listed officials in the bill -- the Administrator of the Energy Information Administration, the Comptroller General of the United States, the Director of the National Energy Technology Laboratory; and the Under Secretary of Commerce for Standards and Technology—with all due respect to their offices and expertise, are fundamentally not the correct authorities to be making what is at its core an environmental regulatory decision. As a result, H. R. 6172, if enacted into law, would create new problems. It would delay for no good reason, USEPA's ability to finalize reasonable CO₂ standards that they have developed for fossil power plants. As a consequence of this delay, H.R. 6172 would:

- Delay new coal plants (with and without CCS) because H.R. 6172 creates additional uncertainty about future regulations. In today's environment, regulatory uncertainty favors natural gas. Industry needs to know what it must do to lower its air pollution emissions, including CO₂ in order to gain permits, rate base projects, and obtain financing. The uncertainty would have an especially damaging effect on proposed coal CCS projects because they need performance standards to gain Public

Service Commission approvals if they are to recoup any of their costs through electricity rates.

- Delay U.S. domestic oil production through EOR. There is a need for CO₂ from industrial sources to expand domestic oil production. Performance standards, coupled with incentives to lower capture costs, can drive greater domestic oil production.
- Delay technology cost reduction, by foregoing the benefit performance standards provide in terms of driving learning, investment, and collaboration.
- Replaces long-standing precedent promoting technology advancement that has achieved significant public health and environmental benefits, with a static, backward looking approach that only considers what is already achieved.
- Significantly delay our ability to get CO₂ emissions from the largest stationary CO₂ sources in the United States.

Conclusions

EPA's proposed performance standards, coupled with an expanded program of incentives to drive EOR using CO₂ captured from fossil EGUs has the potential to achieve cost-effective reductions in the CO₂ emissions causing climate change from the industry most responsible for those emissions. At the same time, the standards can have the added

economic benefit of supporting domestic oil production through enhanced oil recovery (EOR) by signaling that CCS is part of the regulatory future. H.R. 6172 would not achieve either goal but instead would only create new problems, including further uncertainty that would harm the development of more CCS projects and hinder the ability to achieve lasting CO₂ reductions.