

Testimony of David G. Hawkins  
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before the  
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Thank you, Chairman Bingaman and Ranking Member Murkowski, for the opportunity to testify today on policy tools to build a clean energy economy and reduce global warming pollution. My name is David Hawkins. I am Director of Climate Programs at the Natural Resources Defense Council (NRDC). NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.3 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles, San Francisco, Chicago and Beijing.

NRDC is a member of the U.S. Climate Action Partnership (USCAP), the business-environmental coalition that supports enacting comprehensive climate legislation this year and NRDC is a member of the labor-environmental Blue-Green Alliance, which also supports this objective. Today my testimony is presented on behalf of NRDC.

Helping Congress pass effective climate legislation is NRDC's highest priority. It is vital to enact legislation this year – to help deliver economic, energy, and climate security. As President Obama has said, the choice is “between a slow decline and renewed prosperity; between the past and the future.” Clean, sustainable energy is one of the pillars of growth and prosperity in the 21st Century, and enacting comprehensive energy and climate legislation is the way to put that pillar in place. The time to act is now.

I understand this hearing seeks testimony on policy tools other than the approach known as cap-and-trade. The major point I would like to make today is that as members of Congress would make a mistake if you saw your role as selecting a single policy tool to attack the intertwined issues of energy supply, technology innovation and reduction in global warming pollution. The best policy approach is one that does not rely exclusively on one tool but recognizes that real world versions of policy tools have limits that require use of several complementary techniques to help assure success. NRDC believes the best policy package to tackle these challenges of energy security, technology innovation and climate protection is a comprehensive limit or cap on global warming pollution that becomes tighter each year, combined with complementary programs to drive improved performance in key sectors.

USCAP in its January 2009 *Blueprint for Legislative Action*, also embraces the view that a cap-and-trade program, complemented by additional policies and measures is the sounder approach:

“...we believe our nation’s climate protection goals can be met in the most cost effective manner through an economy-wide, market-driven approach that includes a cap-and-trade program as a core element....

“In addition, policies and measures that are complementary to a cap-and-trade program are needed to create incentives for rapid technology transformation and to assure actual reductions occur in capped sectors where market barriers and imperfections may prevent the price signal from achieving significant reductions in emissions within those sectors.”

Today my testimony will focus on the ability of the Clean Air Act to provide a set of complementary global warming pollution performance standards. This combination of a cap and performance standards would further our clean energy objectives and help achieve a comprehensive limit on global warming pollution, patterned on the very successful model and programs of our current Clean Air Act. In order to set the stage for this discussion, I will briefly

cover our successful experience gained from nearly forty years of regulating air pollution under the Clean Air Act.

### **1) Background: The Clean Air Act's Dual-Track Air Quality Strategy**

In 1970 Congress adopted a dual-track program to protect and enhance our nation's air quality. The first track of that program called on states to adopt comprehensive pollution control programs under state law to achieve air quality objectives set forth in National Ambient Air Quality Standards (NAAQS) adopted by EPA. This ambient program is an example of the "assimilative capacity" approach to environmental management—based on the belief that the environment can assimilate a certain amount of pollution or toxins released from human activities without causing identifiable harm. This approach starts by identifying exposure levels of pollution that current research indicates may be tolerable for humans and ecosystems and then seeks to reduce emissions from pollution sources enough to meet the maximum tolerable exposure targets.

There is a comparable concept for global warming pollution. Our planet, its natural systems and our health will suffer myriad harms due to increases in atmospheric concentrations of CO<sub>2</sub> and other so-called "greenhouse" gases that in turn disrupt our planet's climate systems. Climate scientists use global average temperature increases as a warning indicator of this climate disruption and they tell us that we face extreme dangers if global average temperatures are allowed to increase by more than 2 degrees Fahrenheit from today's levels (equivalent to 2 degrees Celsius over pre-industrial levels). National and global caps on annual emissions of CO<sub>2</sub> and other global warming gases by themselves are another example of the "assimilative capacity" approach to environmental management.

The Clean Air Act provides an important model for Congress to examine as it crafts climate protection legislation. The 1970 Act's ambient management program strengthened previous efforts enacted by Congress in the 1960s and relied on states to set control rules for pollution sources at levels just tough enough to bring total air pollution down to the level of the national ambient standards.

But Congress did not rely exclusively on the assimilative approach to air quality protection in the 1970 Act. Congress adopted another strategy designed to minimize air pollution by requiring sources to meet emission performance standards based on modern "best practices" in pollution abatement. The performance standard approach does not set required levels of control based on atmospheric concentrations of pollutants in particular areas or nationally. Rather, the emission reductions required by performance standards are set by assessing how much traditional polluting processes can be cleaned up, taking account of technical and economic constraints.

Congress included this complementary tool in the law because it anticipated that future air quality goals would likely be more ambitious than those defined in 1970 and wanted an independent program that would be effective in reducing total emissions over time. Congress' intent in the performance standard program was to incorporate advances in pollution prevention and control when major new sources and capital investments were pursued since that is an opportune time to design in clean technology.

Congress applied the performance standard approach to both stationary sources (e.g., power plants, oil refineries) and mobile sources but with some important distinctions. In the mobile source area (cars, trucks, buses), only entirely new vehicles were subject to federally-established modern performance standards. Congress was presented with analyses

demonstrating that with traditional rates of “fleet turnover,” most of the benefits of tighter new car standards would be experienced in less than 10 years.

In requiring performance standards for stationary sources, Congress adopted a broader approach. The Act requires that both new and modified existing stationary sources must meet modern performance standards. The 1970 Act’s principal tool for improved air pollution control for new and modified sources was the New Source Performance Standard (NSPS), a national, categorical requirement based on very good, but not the best, pollution minimizing practices. In 1977, when the Act was amended, Congress adopted the new source review (NSR) and prevention of significant deterioration (PSD) programs to strengthen efforts to minimize emissions and air quality impacts from new and modified sources.<sup>1</sup>

In the 1977 Amendments, Congress expanded both the scope of the rigor of the requirements for improved performance from new and modified sources. A key new concept was that the level of the performance requirement would not be tied to often out-of-date NSPS; rather case-by-case determinations of current best performance would be required.

Finally, in the 1990 Amendments Congress expanded the scope and rigor of the performance requirements yet again, recognizing the value of subjecting new and existing pollution sources to modern performance standards in order to both manage air pollution growth and reduce actual pollution levels. Notably, Congress retained and expanded these performance standard approaches – PSD, NSR and NSPS – for the electric power sector at the same time that Congress created the 1990 Amendments’ successful acid rain program. This program, of course, relies upon a cap on sulfur dioxide emissions from the electric power sector, coupled with the ability to trade pollution allowances in order to meet a facility’s obligation under the cap.

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<sup>1</sup> For simplicity, for this testimony I will refer to these programs generally as NSR.

The ambient management program has been a central program of the Clean Air Act since 1970 and it should continue. Critics occasionally have asserted that we should rely on the ambient standards approach as the *only* strategy for improving and protecting air quality. And today some contend that climate legislation should rely exclusively upon cap-and-trade and dispense with performance standards and other source-specific pollution management tools.

The 1970 and later Clean Air Acts reflect a judgment by Congress that the ambient standards approach should be complemented by other independently functioning programs such as the NSR and Mobile Source Emission Standards programs. I think that this judgment was a wise one. The history of air pollution control efforts both before and after the 1970 Act reveals that broad concentration or emissions loading concepts like the ambient standards approach, while conceptually sound, have their weak spots, which when exploited, can prevent the program from solving air quality problems in a timely fashion.

The Clean Air Act's dual track approach to air quality management employs the principle of diversification to reduce risks. In an uncertain world, a prudent investor will forego putting all his money into the one stock with the apparent highest yield. Instead she will spread her risk by selecting a range of investments—some which offer high risk and high yield and others which offer less risk and less yield. The Clean Air Act is also like a stable ecosystem, which has a diversity of species. Such systems are much less likely to fail when stressed than systems that have no diversity.

## **2) The Example of Acid Rain**

The argument has been made that with an overall cap or budget on greenhouse gas emissions, we should simply not care about the amount of emissions from individual sources

or even entire sectors. This argument was rejected by Congress in the 1990 amendments to the Clean Air Act when it both enacted a cap on sulfur dioxide emissions from the electric power sector to combat acid rain, and retained the NSPS and NSR programs for the sources covered under the acid rain trading program. Those programs have jointly continued to function well to minimize emissions from new sources, thereby reducing pressure on the sulfur dioxide cap and demonstrating improved and less expensive means of emission reduction that can be used to reduce emissions from existing sources as well.

When we have ignored the value of complementary programs, we have seen unfortunate results. The RECLAIM program in Southern California is an example of overreliance on the cap mechanism alone: there, exclusive reliance on a cap program led to long delays in reducing emissions from major sources, and to a totally avoidable compliance crisis when the final deadline arrived.

### **3) Ideal versus Real-World Caps**

Like for acid rain, the cap on total greenhouse gas emissions is a core element of an effective greenhouse gas reduction strategy. It creates a market for the many innovations that will be required to achieve the deep reductions we need to protect the climate. But we should not rely on the cap alone. Theoretical arguments that other programs are not needed once we have a cap are misplaced because they ignore the reality that the cap enacted by Congress will involve compromises. The cap schedule set in this legislation is not likely to reduce emissions as fast as may be environmentally and economically prudent. The inclusion of cost-containment provisions may also mean that cap-driven reductions fall short of those that can be implemented cost-effectively in some key sectors.

#### **4) The Example of Coal: Incentives and Offsets**

The goal of reducing emissions by 80% from 1990 levels by 2050 is like a marathon: we cannot hope to complete the race if we do not set and maintain a pace of technology improvement for key sectors from the start of the race. This is especially true for long-lived, high capital investment projects like coal-fired power plants. For good reasons most cap-and-trade proposals include substantial provision for the use of offsets for compliance with the cap. But overreliance on such offsets can lead to problematic results. In this sector, the ability to purchase offsets rather than retrofit existing plants or develop new technologies could result in decisions that seem wise from the perspective of the individual firm but collectively result in higher allowance costs and make it more difficult to achieve longer-term reduction goals. However, the answer is not to eliminate offsets but to complement that flexibility with measures that provide for minimum emission progress paths in major emitting sectors.

Even if offsets in a cap-and-trade structure are of the highest quality and represent emission reductions fully equivalent to emissions from covered sources, overreliance on such offsets by key sectors will leave those sectors poorly positioned to achieve the deep reductions that are required to meet the longer-term cap objectives of the legislation. And if, as is likely, some fraction of offsets do not achieve fully equivalent reductions, then system-wide emissions will be higher than required to meet the legislation's objectives. While the bill that passed the House includes performance standards for new coal plants, it does not include any performance metrics for the existing coal fleet and repeals tools in the existing Act that could be used to achieve reductions from that sector and from other sectors.

If we do not craft a program that will reduce actual emissions from the existing fleet of

coal-fired power plants at a reasonable but steady pace we run the risk of facing claims of threatened power shortages or destructively large electric rate increases as an aging fleet reaches the point where major retrofits or retirements are required for a huge fraction of the fleet in a very short period of time. In the absence of policies to secure steady reductions from existing sources, high-emitting old plants are likely to operate for a long time, increasing demand for allowances and thereby putting upward pressure on allowance prices for all sectors.

EPA analyzed the House bill, which repealed the NSPS and NSR programs for carbon dioxide emissions from existing plants. EPA's analysis indicated that only 8 percent of existing coal generation capacity will be retired by 2025, with most of the retired capacity occurring at "marginal units with low capacity" that are "part of larger plants that are expected to continue generating."

##### **5) Myth: Retaining Performance Standards Would Produce Regulatory Chaos**

NRDC disagrees with claims that implementing current Clean Air Act performance standard authorities for major sources would be disruptive. EPA's proposed rule to apply these programs only to truly large sources concludes that such a program would be administratively reasonable and not interfere with the investments that we all want for a growing economy.

Critics have complained that applying NSR to carbon pollution would result in burdensome coverage of barbecues and donut shops. That concern is easily addressed by raising the NSR threshold to a level that would cover only truly large industrial sources, such as 25,000 tons per year of CO<sub>2</sub>-equivalent emissions. EPA has proposed raising the threshold to that level in a recent Clean Air Act rulemaking. We support inclusion of such a threshold in comprehensive climate legislation.

Establishing higher emissions thresholds under the Act will allow EPA and the states to focus on a small number of the largest sources of GHG emissions. As structured, the performance standards and reviews simply would not apply to the smaller and more numerous but relatively insignificant sources of such emissions. EPA estimates that at a 25,000-tpy CO<sub>2</sub>e applicability threshold for PSD major sources, approximately 400 additional new or modified facilities would be subject to PSD review in a given year. This estimate compares to the 280 PSD permits that are currently issued in a typical year. 74 Fed. Reg. 55,331.

With respect to the Act's Title V operating permit program, EPA estimates that currently there are approximately 14,700 Title V operating permits nationwide. According to the agency, at a 25,000-tpy CO<sub>2</sub>e permitting threshold, about 13,600 existing facilities would be classified as "major sources" for their CO<sub>2</sub>e emissions. EPA "expect[s] that many of the 13,600 existing facilities that would exceed the proposed 25,000-tpy CO<sub>2</sub>e threshold—the majority of which consist of electric generating units and industrial facilities—already have a title V operating permit for other regulated pollutants, and thus would potentially require only a permit revision or modification to address GHGs." 74 Fed. Reg. 55,335.

What would GHG performance standards look like? Clean Air Act section 111 authorizes EPA to establish national new source performance standards (NSPS) for new and existing stationary sources. EPA establishes performance standards based on the best demonstrated systems of emissions reduction, taking into consideration factors such as technical feasibility, cost, and energy requirements. EPA also has discretion concerning the sizes and types (source categories) of facilities to be regulated.

In the early years for some industrial sectors, NSPS and Best Available Control

Technology (BACT) under PSD may be limited to application of demonstrated process efficiency methods and consideration of lower-carbon feed stocks, (e.g., biomass co-firing). As advanced approaches are demonstrated they too will become part of the suite of options that are considered. As with any other pollutant, technical feasibility and economics will determine what standards are reasonable for application to various source categories.

## **6) Federalism and Protection of States' Rights**

New legislation should retain important provisions of the current Clean Air Act that protect the rights of states to go beyond federal minimum requirements for control of global warming pollution. States have been pioneers in the control of greenhouse gas emissions from vehicles and they developed effective programs to deploy energy efficiency and renewable energy resources. States, and entities that states regulate (such as local distribution companies), have program delivery capabilities that the federal government cannot match. States can help drive innovation in low-carbon technologies and processes by exercising the tools that have been created under the current Clean Air Act. Their ability to do so should be protected.

Revocation of NSPS and NSR authority for covered sources of greenhouse gases as proposed in the House bill would cripple many states' ability to drive innovation through these programs. The National Association of Clean Air Agencies has estimated that at least half the states have laws or policies prohibiting state regulators from adopting environmental and public health regulations or other safeguards more stringent than those contained in federal law. These so-called no-more-stringent-than laws prevent state permitting authorities from innovating and protecting their citizens to a greater degree than EPA does under federal law. Accordingly, repealing these NSPS and NSR authorities in federal law would effectively repeal the authority

of many states, forcing such states to seek new legislation from their state legislatures to replace authority they currently have. This would be a dramatic departure from the relationship between federal and state authority that has developed over the past four decades.

## **7) Conclusion**

In conclusion, the NRDC believes that the NSR and NSPS provisions of the CAA are important complement to the cap-and-trade program in new clean energy and climate legislation. The Clean Air Act has been one of our most successful laws, based upon a portfolio approach to air quality protection that combines ambient approaches, performance standards (technology-based or otherwise) and market-based mechanisms like cap-and-trade. Hard experience has taught us that we must not rely exclusively upon one or another of these air management approaches. Accordingly, each successive version of clean air legislation has ratified and expanded a complementary measures strategy, providing us with a balanced toolbox to address these challenges. And when new programs have been created, like the 1990 Amendments' cap-and-trade program for acid rain pollution, Congress wisely preserved the existing tools, like emission performance standards. Climate and clean energy legislation should not disregard these lessons or abandon these successes. Technology-forcing components are critical to the success of our pollution reduction programs, and NSR and NSPS provide important tools to ensuring the transition to a clean energy economy. These programs have been proven to be compatible with industries' desires to make timely investments and by focussing them on truly large emission sources they can and should be employed in our efforts to cut global warming pollution as an important complement to a comprehensive cap approach.