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Via electronic filing and overnight delivery
Air and Radiation Docket and Information Center
Environmental Protection Agency
Mailcode: 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: National Alliance of Forest Owners' Comments on Advance Notice of Proposed Rulemaking: Regulating Greenhouse Gases under the Clean Air Act, 73 Fed. Reg. 44354 (July 30, 2008), Docket # EPA-HQ-OAR-2008-0318.

Dear Sir or Madam:

The National Alliance of Forest Owners ("NAFO") welcomes the opportunity to submit the following comments in response to the Environmental Protection Agency's ("EPA") Advance Notice of Proposed Rulemaking on Greenhouse Gases (the "ANPR"). NAFO values in particular this opportunity to introduce itself and its members to EPA. As described below, NAFO and its members bring unique perspectives and opportunities to the discussion of how to address climate change. We look forward to a strong collaborative relationship with policy makers in Congress and federal agencies as we explore together how our nation's private forests can play a significant role in reducing the nation's greenhouse gas ("GHG") footprint.

NAFO's mission is to protect and enhance the economic and environmental values of private forests through targeted policy advocacy at the national level. At the time of this submission, NAFO's members represent 74 million acres of private forests in 47 states. NAFO was incorporated in March 2008 and has been working aggressively since to sustain ecological, economic, and social values of forests and to assure an abundance of healthy and productive forest resources for present and future generations.

In recent years, both domestically and abroad, there has been an increased focus on the role forests can play to address climate change. First, forests in the United States serve as the most significant natural carbon sink, capturing carbon dioxide (CO₂) through photosynthesis and sequestering CO₂ naturally. Second, responsibly managed forests and harvested wood products have the potential to provide further prospects for reducing atmospheric CO₂ by providing biomass for renewable energy, such as electricity generation and transportation fuels, that have lower lifecycle CO₂ emissions than fossil fuels. Third, GHG regulatory regimes can be developed to allow offset credits

from responsibly managed forests and harvested wood products to be generated and traded, providing a flexible, cost effective way for regulators and industry to achieve net GHG reductions.

The ANPR stands for the proposition that any solution to addressing global climate change will entail a multi-disciplinary effort where virtually every sector of the economy might play some role. While the ANPR focuses on reducing GHG emissions from the conventional mechanisms and operations that release them, NAFO believes that a comprehensive solution to global climate change must take into account a broader range of solutions that achieve GHG reductions. Collectively, our nation's private forests are a fundamental means of helping our country reduce overall GHG concentrations through biogenic carbon capture and storage, renewable, low carbon energy production, and the generation of emission offsets that provide greater flexibility to other industries. NAFO looks forward to the upcoming opportunities to share its expertise and capabilities with EPA and other decision makers to achieve a full array of GHG mitigation benefits.

Summary

Part I introduces the three ways that private forests can contribute to broader efforts to address climate change and reduce greenhouse gases: (1) sequestering carbon in trees and storing carbon in long lived harvested wood products; (2) providing key renewable energy feedstock; and (3) generating GHG emission offset credits that serve as a tool to realize net GHG reductions.

Part II describes why efforts to manage forests responsibly to achieve and enhance biogenic carbon capture and storage opportunities must be voluntary and collaborative. It also explains why the Clean Air Act ("CAA") does not authorize EPA to regulate private forests.

Part III addresses questions raised in the ANPR on whether to pursue renewable fuel mandates under the CAA beyond those required by the Energy Independence Security Act ("EISA"). NAFO explains that at this time pursuing a further regulatory regime under the CAA could lead to greater challenges in actually achieving the GHG reducing goals sought in promoting biofuels.

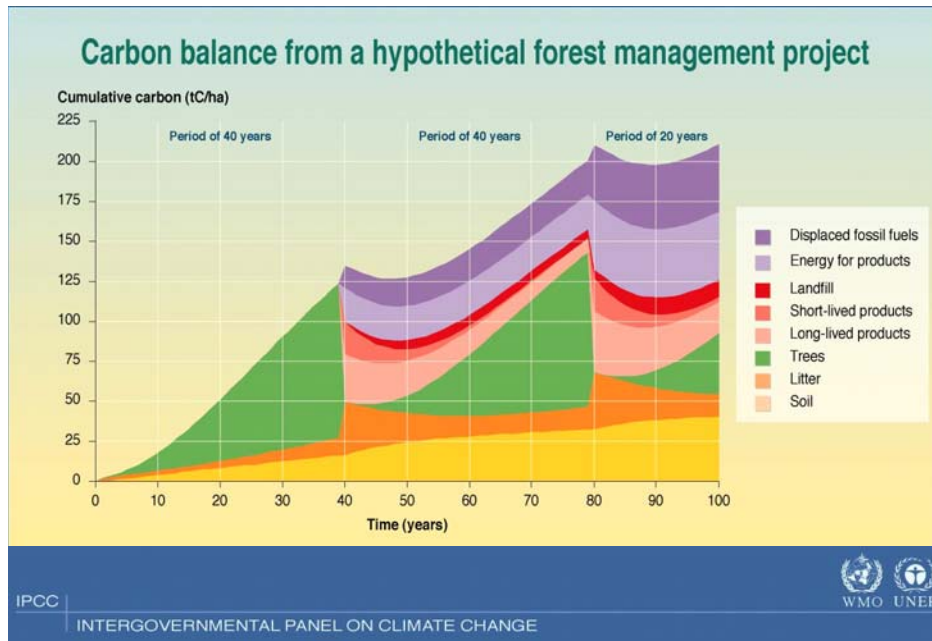
Part IV summarizes the reasons for considering the potential of responsibly managed forests and harvested wood products to provide offset credits under an alternative regulatory regime, such as a "cap and trade" framework. In short, there are strong reasons why any such regime should account for the prospects of generating offset credits from managed private forests.

Finally, Part V, introduces the opportunities for NAFO to work collaboratively with the government to fashion climate change solutions.

I. RESPONSIBLY MANAGED PRIVATE FORESTS PLAY A KEY ROLE IN ADDRESSING CLIMATE CHANGE.

The basic proposition that responsibly managed forests play a critical role in sequestering carbon is beyond dispute. As the ANPR recognizes, encouraging responsibly managed forests has been identified as one of five key "groups of strategies that could substantially reduce emissions between now and 2030." Regulating

Greenhouse Gas Emissions Under the CAA, 73 Fed. Reg. 44,354, 44,405 (July 30, 2008). Similarly, the Intergovernmental Panel on Climate Change (“IPCC”) report on mitigation technologies highlights forest management as a primary tool to reduce GHG emissions. *Id.* at 44,405-06. Indeed, the IPCC contends that, “In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the greatest mitigation benefit.”¹ The following graphic illustrates this work (the “IPCC Managed Forest Graph”):²



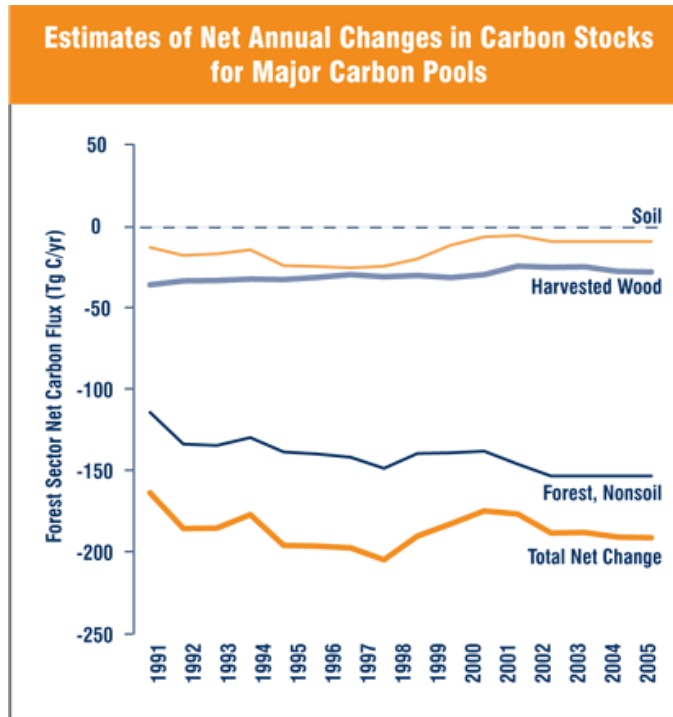
Private forests and the products they generate thus should be considered as valuable, multifaceted tools in the effort to reduce U.S. greenhouse gas emissions and remove CO₂ from the atmosphere.

- A. Responsibly managed forests and harvested wood products function as a carbon sink.

As the following EPA chart demonstrates, the Agency has recognized the role of managed forests and harvested wood products in the United States as providing a significant carbon sink:

¹ Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, page 543.

² Climate Change 2001: Mitigation. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Technical Summary, Section 4.1, Figure TS-6 (2001).



EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006.³ Similarly, the ANPR acknowledges that:

Overall, forestry, land use and land-use change activities are considered “sinks”, absorbing carbon dioxide from the atmosphere through a process known as carbon sequestration. In 2006 these activities resulted in removing 883.7 MMTCO₂e (240.8 MMT Carbon) from the atmosphere. Although these activities sequester carbon, forestry and land management activities do produce greenhouse gases. For example, in 2006 forest fires resulted in CH₄ emissions of 24.6 MMTCO₂e and in N₂O emissions of 2.5 MMTCO₂e. As long as the incidence and severity of wildfires remains constant, removal of carbon from the atmosphere through regrowth of vegetation in burned areas equals the wildfire carbon products emitted.

Technical Support Document for Stationary Sources at 39 (June 2008).

The process of sequestration and storage is a natural by-product of tree growth. Through the process of photosynthesis, trees take up carbon dioxide from the air and in the presence of light, water, and nutrients, release oxygen and manufacture carbohydrates that are used for metabolism and growth of above and below ground organs. Concurrently with taking up carbon dioxide, trees metabolize some of the produced carbohydrates, which results in release of some carbon dioxide in respiration.

Managed forests in the United States present a clear opportunity to reduce atmospheric CO₂ and mitigate GHG emissions. Available forest management activities

³ Available at USEPA #430-R-08-005, <http://www.epa.gov/climatechange/emissions/usgginventory.html>.

that can aid in reducing greenhouse gas emissions include afforestation, reforestation, conservation, and production of harvested wood products. At the same time, it is well understood that deforestation in other parts of the world is one of the various challenges in developing a global solution to climate change. As NAFO and its members work to contribute climate change solutions domestically, they also will seek to be cognizant of how efforts and experience in the United States might be applied elsewhere to address the global challenge of climate change.

B. Forest biomass can be a reliable energy source with a smaller greenhouse gas footprint than fossil fuels.

Forests can provide ample, sustainable, domestic supplies of biomass to produce low-carbon sourced electricity, low-carbon liquid transportation fuels, and ultra-low carbon synthetic natural gas that can be substituted for higher carbon sources of electricity and fuels.

Wood and wood residues are a dependable, domestic renewable energy resource that can be utilized for energy production through processes like biomass generation, wood gasification, and conversion to cellulosic biofuels. Wood and wood residues are commonly utilized to produce steam and heat hot water boilers. Wood and wood residuals can also be used to fire combined heat and power systems to provide steam that is efficiently used to sequentially produce both electricity and thermal energy for manufacturing processes. Newer “wood gasification” technologies heat wood in an oxygen-starved environment, collect gases from the wood, and later mix the gases with air or pure oxygen for combustion. Wood gases can be cooled, filtered, and purified to remove pollutants to be used as fuel for internal combustion engines, micro-turbines, and gas turbines. More recently, research has enabled low energy-intensive methods of converting wood into sugar and sugar into cellulosic biofuel. In short, wood and wood residuals have come to play an increasingly important part in renewable energy generation, particularly as new technologies expand the potential use of this dependable resource.

One of the tremendous benefits offered by managed forests results from the “carbon neutrality” of wood and wood residues. The international greenhouse gas accounting methods developed by the IPCC and the domestic greenhouse gas reporting program administered by the Energy Information Administration recognize that “biogenic” carbon such as the carbon contained in wood and wood residues, is part of the natural carbon balance and will not add to atmospheric concentrations of carbon dioxide.⁴ Also, the EPA’s Biomass Combined Heat and Power Catalog, a reference document of the EPA Combined Heat and Power Partnership, states that there is a “scientific consensus’ . . . that the carbon dioxide emitted from burning biomass will not increase total atmospheric carbon dioxide if this consumption is done on a sustainable basis.”⁵ In the context of forestry, according to the IPCC,⁶ “sustainable” means the maintenance of forest stocks over the long term, while producing a sustained yield of timber, fiber, or energy from the forest. Indeed, the IPCC contends that “[i]n the long

⁴ Guidelines for Voluntary Greenhouse Gas Reporting, 10 CFR Part 300 (2006).

⁵ U. S. Environmental Protection Agency Combined Heat and Power Partnership, *Biomass Combined Heat and Power Catalog of Technologies*, 96 (Sept. 2007) available at www.epa.gov/chp/documents/biomass_chp_catalog.pdf.

⁶ Climate Change 2007: Mitigation of Climate Change et al eds., 2007.

term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.”⁷

In evaluating the GHG emissions associated with fuels, a lifecycle analysis (“LCA”) incorporates all steps in a “product system” to evaluate broader environmental impacts of products and processes. Work by the Consortium for Research on Renewable Industrial Materials (“CORRIM”), for example, has documented⁸ how managed forests can produce sustained, overall net GHG emission *reductions* when carbon is stored in enduring harvested wood products and/or when harvested wood products are substituted for products with higher energy/carbon footprints. Similarly, the EPA, in its April 2007 Regulatory Impact Analysis for the Renewable Fuels Standard Program (EPA 420-R-07-004), has recognized the greenhouse gas emissions reductions that would result from the use of cellulosic biofuels. Indeed, using the “displacement index” approach, EPA has determined that every BTU of gasoline replaced by cellulosic ethanol will produce lifecycle GHG emission reductions of 92.7 percent.

With respect to electricity from biomass, recent studies have documented the GHG benefits resulting from the California biomass energy industry over the past 30 years—benefits that can be further expanded in the future. One study⁹ released by the Green Power Institute, the Renewable Energy Program of the Pacific Institute, has found that biomass energy production in California has provided two kinds of greenhouse gas benefits. In addition to avoiding the GHG emissions associated with the production of fossil fuels, biomass energy production also avoids the biogenic greenhouse gas emissions (mainly methane) of the various alternative disposal fates for the residue and waste biomass, replacing them with the lower potency greenhouse gas emissions of energy production. As the study observes:

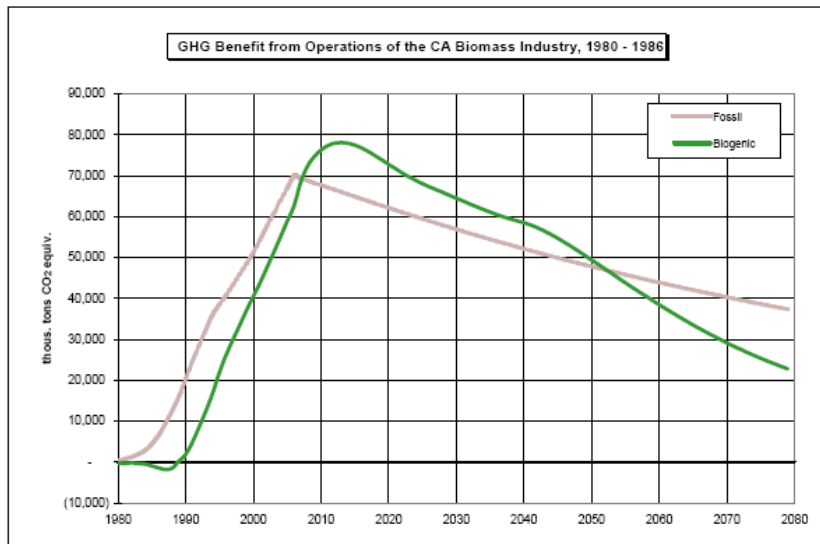
The modern California biomass power industry has operated for almost 30 years. The figure below shows the cumulative greenhouse-gas benefits that have already been provided by the California biomass power industry since its inception through 2006. The chart does not show 2007 or later operations of the industry, which are additive to the curves in the figure. Atmospheric greenhouse-gas levels in 2006 were lower by 70 million tons of CO₂ equiv. of fossil greenhouse gases and by 62.5 million tons of CO₂ equiv. of biogenic greenhouse gases as a result of solid-fuel biomass power production in California during 1980-2006. The greenhouse-gas reductions already in the books will continue to provide benefits well into the future.”¹⁰

⁷ *Id.* at 549.

⁸ See Bruce Lipke et al., CORRIM: Life-Cycle Environmental Performance of Renewable Building Materials, 54 *Forest Prod. J.* 8 (2004).

⁹ Gregory Morris, Ph.D. *Bioenergy and Greenhouse Gasses* (2008).

¹⁰ *Id.* at 4.



The potential of wood and wood residues to reduce overall GHG emissions through renewable energy properly may raise questions concerning the biomass production capacity of our nation’s forests. The U.S. Department of Agriculture (“USDA”) and the U.S. Department of Energy (“DOE”)¹¹ have concluded that U.S. farms and forests can produce a *conservatively estimated* 1.3 billion tons of biomass each year on an ongoing basis—998 million tons from agricultural lands and 368 million tons from forests—which together, if converted to biofuels, can displace approximately 30% of current U.S. petroleum use. The study concludes that the forest products industry will continue to meet supply requirements for conventional, existing forest products. This study underscores the long-term viability of wood and wood residues as a renewable energy source and reinforces the need to invest in enhanced productivity in the future.

To fully realize the potential of wood and wood products to play a key renewable energy role, laws and regulations must properly accommodate and encourage their use. We are troubled that the restrictive definition of “renewable biomass” contained in Renewable Fuels Standard (“RFS”) of the EISA can be read to exclude some present and potential future supplies of wood and wood residues from eligibility to contribute to the RFS. Such a narrow definition creates disincentives to maintain or increase the forest land base. Unless addressed, this will diminish the ability of forests to fully contribute to GHG reduction and fossil fuels displacement goals. The emerging renewable energy industries that use or aspire to use forest wood and wood residues to produce power, liquid fuels, or synthetic natural gas face other pragmatic challenges as well. New renewable energy projects, many of which are proposing to employ “first-of-a-kind” technologies, are currently trying to secure financing, negotiate off-take agreements, arrange feedstock supply, hedge commodity price fluctuations, and anticipate policy shifts in what is already a highly constrained credit environment. Given

¹¹ U.S. Department of Energy and U.S. Department of Agriculture, *Biomass as Feedstock for a Bioenergy and Bioproducts Industry: The Technical Feasibility of a Billion-Ton Annual Supply* (April 2005), available at www1.eere.energy.gov/biomass/pdfs/final_billionton_vision_report2.pdf.

the potential of these emerging green industries to deliver lasting economic and environmental benefits, every effort should be made to encourage their establishment.

Of course, the development, production and use of even the “greenest” energy resource will result in some unavoidable environmental impacts. Nonetheless, it is necessary and prudent to consider the environmental impacts resulting from the alternative or “green” energy resource compared to those resulting from the conventional energy resources displaced. Accurate lifecycle analysis based on sound science and appropriate assumptions will help this evaluation. As discussed in Part III.B, it is essential that such analysis be approached with the utmost rigor to avoid inaccurate and imprecise conclusions.

C. Promoting the mitigation benefits of responsibly managed forests and harvested wood products can help offset GHG emissions from other sectors.

A climate change program focused on reducing GHG emissions through market mechanisms that generate credits should allow offsets from responsibly managed forests. NAFO does not advocate for any particular GHG trading regime in this document but does offer some considerations in response to the ANPR’s request for comment on implementing such mechanisms.

Private forests long have been recognized as a source of real, verifiable, reductions in GHGs. As described in Part I.A, afforestation and reforestation, conservation, and responsible forest management and harvested wood products can mitigate atmospheric GHG levels. In many cases, private forests can achieve GHG reductions at a lower cost than emissions sources in sectors addressed in the ANPR. By promoting policies that encourage regulated entities to work voluntarily with the private forest sector to offset their GHG emissions, the nation can better attain emissions limits in a cost-effective manner.

Most established GHG trading regimes credit forestry activities. For example, trading platforms and registries that recognize forest management include the Chicago Climate Exchange (“CCX”), and the Voluntary Carbon Standard (“VCS”). The Regional Greenhouse Gas Initiative (“RGGI”) and the Western Climate Initiative (“WCI”) both intend to consider forest management offsets in the very near future.¹² Given the scope of emissions reductions that can result from improved forest management in developing countries, it is important that managed forests play a role in future national and international offset programs.

We recognize that no protocol or registry is perfect. However, that should not distract from the role that responsible forest management and harvested wood products can play in reducing GHG levels and the greater flexibility responsibly managed forests offer to achieve net GHG reductions in a cost-effective manner. Regulators should seek

¹² In contrast, the United Nation’s Clean Development Mechanism (“CDM”), does not allow credits for forest management but limits credits to afforestation or reforestation. This approach has produced very few projects in the forestry area due to unnecessary restrictions in the program. By comparison, the Voluntary Carbon Standard, a global consortium dedicated to improving standards and programs for offsets, has proposed potential standards for forestry management.

to encourage and credit such benefits when implementing policies to achieve GHG reductions economy wide.

II. ALTHOUGH RESPONSIBLY MANAGED FORESTS PROVIDE OPPORTUNITIES TO REALIZE GHG REDUCTIONS, EPA LACKS AUTHORITY TO REGULATE THE FORESTRY SECTOR AS A STATIONARY SOURCE UNDER THE CLEAN AIR ACT.

As explained above, NAFO strongly believes responsibly managed forests have a significant role in mitigating GHG levels, and NAFO and its members look forward to a collaborative effort with EPA to utilize these forests to address climate change. At the same time, efforts to utilize and accommodate the advantages of carbon capture and storage must be voluntary and not force the forestry or the forest management sector to be regulated under the CAA. In particular, NAFO does not believe EPA can, nor should, impose mandatory regulations on forests, or treat them as stationary sources under the CAA.

In the ANPR, EPA considers whether the agricultural and forestry sectors should be considered a stationary source, and therefore regulated under CAA Section 111. Technical Support Document on Stationary Sources at 36.¹³ NAFO respectfully maintains the answer is “no.” While responsibly managed private forests can play their part in bringing solutions to the nation’s climate change challenges, it is important at the outset that EPA recognize the distinct nature of forests, which function as natural carbon sinks, and differentiate them from the stationary sources subject to CAA regulation.

A. A Forest Is Not a Stationary Source.

The New Source Performance Standards, 42 U.S.C. § 7411, require the EPA Administrator to promulgate standards of performance applicable to designated categories of newly constructed stationary sources. *Id.* § 7411(b). EPA promulgated the original list of designated sources in 1971.¹⁴ The Administrator may add new source categories to this list upon an endangerment finding. The statutory definitions show that regulation of the forestry sector is incompatible with the New Source Performance Standard (NSPS), if not outright prohibited.¹⁵

Under the statute, a “stationary source” is “any building, structure, facility, or installation which emits or may emit any air pollutant.” 42 U.S.C. § 7411(a)(3). A plain reading of these terms excludes forests from the NSPS. No forest meets the description of the “facilities” or “stationary sources” given in the legislative history and one cannot equate the planting of forests to “entire new facilities” or “expanded or modified facilities.” Forests were not regarded by Congress as emission sources contributing “significant . . . air pollution problems” that “endanger[] . . . the public health or welfare.” Congress never intended the NSPS to go beyond industrial or similar discrete pollution sources and designed the NSPS to fit that end. Encompassing the forestry sector into a regulatory

¹³ Similarly, the ANPR preamble itself suggests requiring “mitigation technologies” for the forest industry. 73 Fed. Reg. at 44,417.

¹⁴ List of Categories of Stationary Sources, 36 Fed. Reg. 5931 (Mar. 31, 1971).

¹⁵ See, e.g., *Caminetti v. United States*, 242 U.S. 470, 485-86 (1917) (“Statutory words are uniformly presumed . . . to be used in their ordinary and usual sense, and with the meaning commonly attributed to them.”).

scheme designed for structures, facilities, and installations operated by industrial, commercial, or municipal entities is impractical and would not be an effective way of using forests to achieve GHG reductions.¹⁶

Similarly, a “new source” is “any stationary source, the construction or modification of which is commenced after the publication of regulations...prescribing a standard of performance under this section...”¹⁷ The statute’s use of “construction or modification” is another example of how the NSPS was not directed at the forestry sector. While these terms are commonly applied to the building or renovation of industrial facilities, they are completely foreign to forest management practices.

Further, the regulation of forest management practices does not comport with the stated NSPS goals, which are clearly aimed at reducing industrial source emissions through evolving pollution control technologies while minimizing economic harm. Each of these goals is discussed throughout the Clean Air Act’s legislative history.¹⁸ None of these goals, or the methods enacted to achieve these goals, applies to the forestry sector.

First, Congress intended the NSPS to create uniform pollution control standards to prevent industry from fleeing States with stringent pollution control laws to those with less regulation.¹⁹ This uniformity of pollution controls, triggered whenever an older plant makes any modification, was also crafted to prevent competitive imbalances between new plants and existing plants.²⁰ This legislative history makes clear that Congress targeted industrial sources of pollution. Forests are not subject to pollution control standards as they are not an air pollution emission source. Further, forests exist where conditions support planting or growing forests—a forest owner cannot practicably move their forest lands to another state with more lenient regulation. And the notion that a

¹⁶ The legislative history of the Clean Air Act further affirms that forest management practices under the NSPS, or any other portion of the Clean Air Act, was never intended by Congress. The law was directed at automobiles and industrial sources of traditional air pollutants, such as soot and smog. *See, e.g.*, 116 Cong. Rec. H 19,212 (1970) (“The most dramatic evidence of air pollution is always to be found in dirty smokestacks in factories, belching smoke across populated communities ... 80 percent of the poisons in our air come right out of the automobile exhaust pipe.”) (statement of Rep. Van Deerlin).

¹⁷ 42 U.S.C. § 7411(a)(2).

¹⁸ *See, e.g.*, H. Rep. No. 95-294 at 184-86 (1977).

¹⁹ *See id.* at 184 (uniform standards “avoid favoring some areas of the country over others with respect to new sources”); H. Rep. No. 91-1146 at 3 (1970) (“The promulgation of Federal emission standards for new sources ... will preclude efforts on the part of States to compete with each other in trying to attract new plants and facilities without assuring adequate control of extra-hazardous or large-scale emissions therefrom.”); 116 Cong. Rec. S 32,902 (Sept. 21, 1970) (statement of Sen. Muskie) (“Those areas which have levels of air quality which are better than the national standards should not find their air quality degraded by the construction of new sources. There should be no ‘shopping around’ for open sites.”); 116 Cong. Rec. H 19,218 (June 10, 1970) (Statement of Rep. Vanik) (“A steel mill, operating anywhere in Ohio, or in the Nation, should be required to make the same kind of effort to control the pollution emission of an oxygen steel furnace ... If we would insist on uniform approaches for pollution control of this industry – wherever the plants are located – the competitive benefits of a dirty plant would be eliminated. A steel plant in Youngstown, Massilon, or Middletown would have to make the same effort to control pollution as a plant in Cleveland. There would be no profit in pollution.”).

²⁰ *See, e.g.*, 116 Cong. Rec. H 19,212 (1970) (“MR. ECKHART: Therefore, it would appear to me that for instance, an old steel plant which altered its production in a particular unit or operation, even though that unit was an old unit, would be controlled just as its competitor, a new steel plant, would be controlled, where new equipment plus new sources of emission occur? MR. STAGGERS: That is correct.”).

“new” forest could be economically disadvantaged through regulation when compared to “existing” forests is inapplicable.

Second, the NSPS was structured to promote long-term economic growth by allowing the continued development of industrial hubs. “If each large new pollution source were required to use best practicable control technology, then more new sources could locate in a given area. This in turn would permit more jobs, more production, and greater possibilities for long-term economic growth....”²¹ Again, applying Congress’ goals for the NSPS to forest management practices reaches an irrational result. Although privately owned forests are economically productive and provide jobs, they are not capable of being consolidated into dense areas the way industrial facilities often locate in and around major urban economic centers.

Third, the NSPS requires new industrial facilities to install the required control technologies at the time of construction, which “will plainly be less costly than requiring retrofit when pollution ceilings are reached.”²² Forests, of course, do not have to install any pollution controls and will never have to retrofit with new technologies whenever EPA lowers attainment levels. The NSPS goal of saving money by avoiding retrofit technologies makes no sense when applied to the forest sector.

Fourth, the use and development of the best control technologies allow stationary sources to burn higher sulfur fuels, preventing an over-reliance on low-sulfur coal, low-sulfur fuel oil and natural gas.²³ Obviously, this goal of the NSPS has no application to forests as they are not industrial fuel-burning emission sources.

Fifth, the NSPS was intended to create incentives for the development of new pollution control technologies.²⁴ Again, this goal has no applicability to forests.²⁵

²¹ H. Rep. No. 95-294, at 184-85 (1977).

²² *Id.* at 185. See also H.Rep. No. 91-1146, at 16 (1970) (“The overriding purpose of this section [NSPS] would be to prevent new air pollution problems, and toward that end, maximum feasible control of new sources at the time of their construction is seen by the committee as the most effective and, in the long run, the least expensive approach.”).

²³ H. Rep. No. 95-294, at 186 (1977).

²⁴ See *id.*; H. Rep. No. 91-1146 at 17 (1970) (“Industrial firms would be required to increase efforts to insure that new plants and equipment perform in accordance with the promises and commitments made by plant designers and equipment builders. New-source standards would thus provide maximum incentives to expand technology to insure adequate margins of safety.”).

²⁵ The legislative history is replete with references to industrial pollution sources. See, e.g., 116 Cong. Rec. S____, 91 Cong. Senate Debates 1970 32900, 32918 (1970) (“This provision requires that new sources, that is, the industry plants, be certified by the Secretary before they begin operation, to insure they will meet the performance standards....”) (Statement of Sen. Cooper); 116 Cong. Rec. H____, 91 Cong. House Debates 1970 19200, 19218 (1970) (“HEW could establish uniform pollution control standards for the chemical, oil refining, foundries, food processing, and cement-making industry, and other industries”) (Statement of Rep. Vanik); *Bills to Amend the Clean Air Act: Hearing Before the Subcomm. on Public Health and Welfare of the H. Comm. on Interstate and Foreign Commerce*, 91st Cong. House hearings 171, 281 (1970) (Statement of Robert H. Finch, Sec’y, Dep’t of Health, Education and Welfare) (“In the years ahead, however, many potentially significant new stationary sources of air pollution will come into being – to meet growing demands for electric power, manufactured goods, and other necessities and amenities of modern life. Large stationary sources, such as electric generating plants, iron and steel mills, and petroleum refineries, cement plants, et cetera, often have adverse effects on air quality over broad geographic areas.”). The drafters of the NSPS viewed forests as casualties of air pollution, not *causes* of air

Congress never planned for the treatment of forests as stationary sources of pollution, did not structure NSPS regulations to account for their inclusion, and certainly did not intend for the NSPS program to apply to the forest sector as suggested by EPA. Indeed, in 38 years of developing regulations, EPA has never sought to regulate forest practices under the NSPS, indicating a consistent interpretation from the outset that the CAA does not govern forests.

- B. Responsibly managed private forests serve as the nation's most significant carbon sink, do not "endanger" public health or welfare, and thus there is no basis for a New Source Performance Standard for forestry.

While the EPA Administrator is authorized to add a source category to the list of those already subject to NSPS regulation, the Administrator first must decide whether "in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."²⁶ Yet, as explained in Part I.A forests capture and store GHGs and are not net emitters of GHGs. They cannot be said to cause or contribute to air pollution which reasonably anticipated to endanger public health or welfare, even if EPA makes an endangerment finding for GHGs under some other part of the CAA for other sources.

The ANPR discusses in detail how an endangerment finding under one CAA provision, such as for motor vehicles, has the potential to trigger regulation of other types of sources such as aircraft. Yet, in the context of CAA Section 111 and the NSPS, it should be noted that the endangerment finding standards for the NSPS differ from those for an endangerment finding regarding air pollutants in other CAA provisions, including those provisions examined in *Massachusetts v. EPA*, 549 U.S. 497 (2007). The endangerment findings for Titles I and II, at 42 U.S.C. §§ and 7408(a)(1)(A) and 7521(a)(1)(A), respectively, require a determination that a specific air pollutant poses a danger to the public health and welfare. Under the NSPS, however, the Administrator makes this finding for a *specific industrial source category* based on the source category's emission of air pollutants. Thus, even if EPA were to consider regulating the forest industry as a Section 111 source category, it could not make the requisite endangerment finding for GHGs because the *forestry sector* cannot be said to endanger public health or welfare.

- C. Utilizing the forestry sector as an opportunity to realize GHG reductions should be done on a voluntary and collaborative basis with EPA and other decision makers as opposed to being regulated as a stationary source under the Clean Air Act.

Having made the point that the CAA never was intended nor could be implemented to regulate forests, NAFO looks forward to working collaboratively with EPA to develop solutions that contribute in a real and verifiable manner to reduce the nation's GHG contributions. As the ANPR points out, responsible forest management

pollution. See, e.g., Vanik at 19217 ("in addition to causing disease and death, air pollution cuts crop production, destroys trees, and is estimated to cost the economy \$30 billion annually. The type of damage that can be done is well illustrated by the U.S. Forest Service estimate that 1.3 million trees in the San Bernadino National Forest will die in the next 5 years because of smog on the freeways.").

²⁶ 42 U.S.C. § 7411(b)(1)(A).

provides a key opportunity to substantially reduce GHG emissions between now and 2030. There are alternative means for EPA to work with forests owners, other government agencies, and other interested stakeholders to mutually develop strong voluntary programs to encourage forest management techniques aimed at reducing GHGs. EPA has a demonstrated history of success in voluntary programs such as Climate Partners, EnergyStar, and Performance Track. NAFO looks forward to working jointly with the EPA, DOE, USDA, and interested stakeholders to develop market-based incentives to encourage the use of responsible forest management to address climate change.

III. NAFO RESPECTFULLY BELIEVES THAT REGULATIONS TO MANDATE BIOFUELS SHOULD BE PURSUANT TO A SOLE AUTHORITY AT THIS TIME, NOT MULTIPLE REGULATORY REGIMES.

- A. EPA should avoid invoking Clean Air Act authority separate from the mandates in the EISA to achieve GHG reductions through biofuels at this time.

In Part VI.D of the ANPR, EPA solicits comment on several critical questions related to the development of regulations pertaining to biofuels, including whether EPA, under existing CAA authority, should seek to mandate biofuels beyond those specified in EISA. While NAFO appreciates the thoughtful and thorough questions EPA considers, biofuels regulations should be limited to a single authority at this time, and should not expand beyond the authority in the EISA. There undoubtedly are significant issues to be resolved in implementing the EISA; first and foremost to NAFO is correcting an overly restrictive definition of “renewable biomass” that can be read to exclude wood and wood products. At the same time, adding an additional regulatory regime of biofuel production under CAA § 211(c) could interfere further with the EISA’s production mandates and frustrate Congressional intent. Thus, NAFO recommends at this time that EPA focus on proper implementation of the EISA in a manner that ensures a proper role for wood and wood products and not impose an additional regulatory regime under the CAA that could lead to further confusion and challenges in realizing biofuel advancement.

Congress in EISA § 202 exercised its specific judgment as to what incentives should be provided for biofuels with lower GHG lifecycles. In other words, “EPA has limited discretion under 211(o) to improve GHG performance of fuels” due to Congress’ balancing of multiple factors and priorities.²⁷ Thus, the EISA already makes certain distinctions among categories of biofuels with the goal of encouraging the development and use of such fuels generally, taking into account GHG lifecycle reductions. It sets production schedules for renewable fuels in general and three classes of renewable fuels in particular: advanced biofuel, cellulosic biofuel, and biomass-based diesel. 42 U.S.C. §§ 7475(o)(2)(B)(i)(I)-(IV). Advanced biofuels are those other than corn starch-based ethanol that have a GHG lifecycle of at least 50% less than the baseline GHG lifecycle. *Id.* § 7545(o)(1)(B)(i). Biomass-based diesel also must be at least 50% less than the baseline GHG lifecycle, while cellulosic biofuels must be at least 60% less than the baseline GHG lifecycle. *Id.* §§ 7545(o)(1)(D)-(E).²⁸ Congressional mandates for total renewable fuel production are ambitious, requiring production to more than double

²⁷ 73 Fed. Reg. at 44474.

²⁸ The EISA also regulates renewable fuel facilities in that all new renewable fuel refineries must achieve a 20% reduction in the baseline GHG lifecycle. *Id.* § 7545(o)(2)(a)(1).

between 2008 and 2014 and then double again eight years later. Likewise, subcategory mandates are aggressive. Advanced biofuel production must triple between 2009 and 2012 and more than triple again by 2016. Cellulosic biofuel production must increase by 250% between 2010 and 2011 with production increasing another 1,700% five years later. Biomass-based diesel production needs to double between 2009 and 2012.

The ANPR considers further subdividing these classes and ranking several GHG lifecycles for each based on various “pathways for producing” them.²⁹ One potential scenario that EPA wants to examine is where “the least costly fuels meeting the cellulosic biofuel GHG performance threshold ... may not be the fuels with the greatest GHG benefit or even the greatest GHG benefit when considering the cost.”³⁰ Without this examination, and some EPA-imposed penalty for sub-classes meeting Congressional standards but not having the lowest GHG lifecycle among the sub-classes, the ANPR expresses concern there will be “no incentive ... for production of particular fuels which would minimize lifecycle GHG emissions within the EISA fuel categories.” Should EPA conduct its extended GHG lifecycle analyses and provide “incentives” for those sub-classes it favors, the Agency risks thwarting the Congressional goals of the EISA. Where one sub-class of fuels is singled out for preferred use, the result is an artificially increased demand that may produce an inadequate supply. Concomitantly, demand for disfavored sub-classes will fall, leading to a matching decline in production, if not a complete cessation.

EPA previously recognized this logic in its proposed utility boiler maximum achievable control technology (“MACT”) rulemaking.³¹ There, EPA considered requiring all coal-fired power plants to switch “to a better (or lower [mercury]-containing) seam of coal used within a subcategory” of coal.³² The Agency, however, ultimately declined to make such specific distinctions. Among the reasons that EPA declined to require the use of specific seams within coal subcategories was that “requiring all plants to combust coal from a specific seam is not a viable long-term solution because the supply of coal from that seam would be rapidly depleted.”³³ Similar to utility boiler MACT, in the ANPR there is insufficient economic, technical, and scientific data at this time to make distinctions among the long term viability of various subclasses of renewable fuels. For example, EPA has performed no analysis of whether preferred sub-classes of biofuels could meet resulting demand surges. Nor has it analyzed how a drop in demand from non-preferred sub-classes would impact investment in or production of those sub-classes. All of these potential machinations could occur in a rapidly fluctuating market environment where, for example, at the time of these comments, the price of oil has dropped dramatically compared to the time of the EISA’s adoption. It is quite possible that EPA’s “incentive” regulations could cause or contribute to a failure to meet one or more of the EISA production mandates due to over-demand of the preferred sub-classes and the under-production of other non-preferred sub-classes, despite meeting Congressional standards, resulting in an overall reduction in biofuel investment and production.

²⁹ 73 Fed. Reg. at 44475.

³⁰ *Id.*

³¹ Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 69 Fed. Reg. 4652 (Jan. 30, 2004).

³² *Id.* at 4669.

³³ *Id.*

In summary, NAFO believes EPA should not employ CAA Section 211(c) at this time as an additional regulatory regime separate or in addition to the EISA given the current complexity of developing and regulating biofuels at the early development of the biofuel industry. At the same time, NAFO looks forward to offering its views and expertise on the specific questions EPA raises, including whether at some point in the future further CAA authorities should be reconsidered. In particular, as discussed at Part I.B, NAFO is troubled that the restrictive definition of “renewable biomass” contained in the RFS of the EISA could be read to exclude some present and potential future supplies of wood and wood residues from eligibility to contribute to the RFS, in turn creating potential obstacles to realizing the full potential of wood and wood products to play a key renewable energy role. NAFO is strongly advocating to clarify that wood and wood products should be part of the RFS, but at the same time reserves the right to engage EPA on developing regulations under CAA Section 211(c) for biofuels from wood and wood products in the event the EISA is read restrictively to exclude such products.

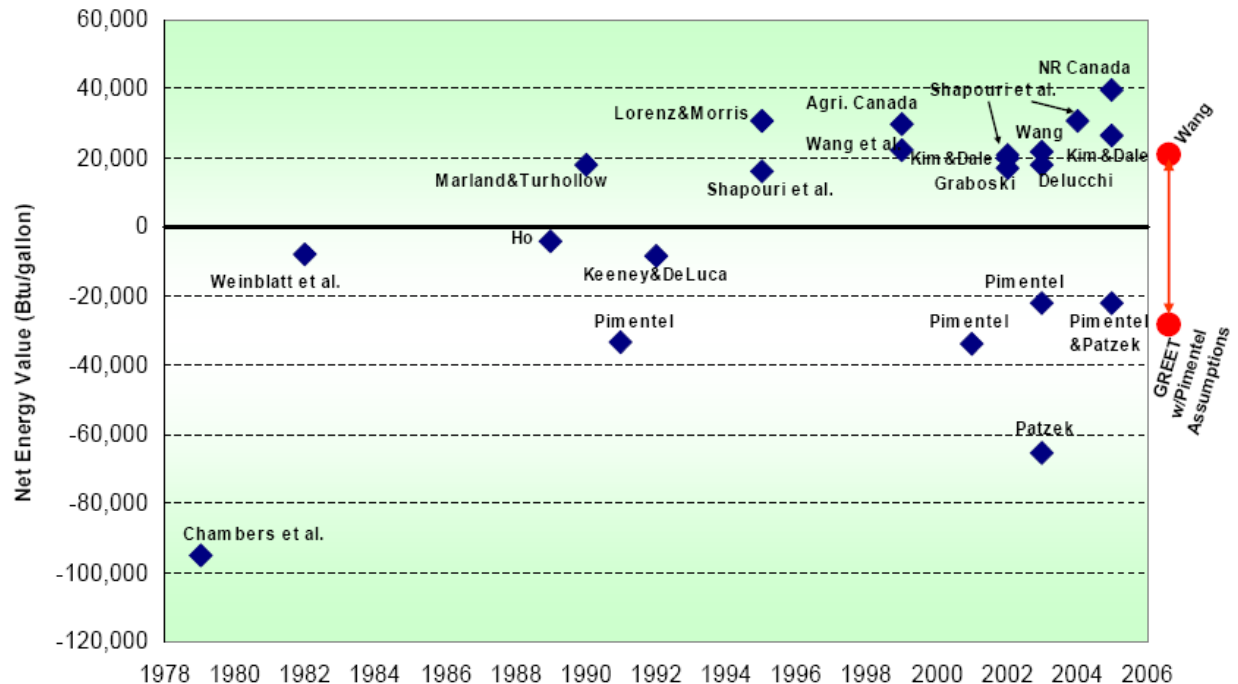
B. Biofuels regulations must rely on the best available science.

As mentioned in Part I.B, we agree that lifecycle analysis is the correct approach to employ in an effort to gain insights into broad policy questions, but we hasten to echo EPA’s own caution with result to the use of LCA, as expressed in its April 2007 Regulatory Impact Analysis for the Renewable Fuels Standard Program (EPA 420-R-07-004). As EPA stated, “lifecycle modeling typically provides only general comparisons, based on industry-wide estimates and assumptions ... results of this type of analysis are highly dependent upon the input data used, the variables considered, and the assumptions made.”³⁴

Indeed, even where the focus is a single feedstock to biofuel pathway, such as corn to ethanol via the traditional fermentation/distillation process, different researchers have reached widely varying conclusions while employing LCA. For example, the diagram below³⁵ depicts the wide variety of results from studies purporting to show the “energy balance” of corn ethanol production, here defined as Btu content in a gallon of ethanol minus the lifecycle fossil energy used to produce that gallon of ethanol. The results range from a negative energy balance of nearly 100,000 Btu/gallon, to a positive energy balance of 40,000 Btu/gallon—the difference resulting from variations in the various assumptions and methodologies employed by the investigators.

³⁴ EPA, Regulatory Impact Analysis: Renewable Fuel Standard Program, EPA420-R-07-004 219 (April 2007) available at <http://www.epa.gov/oms/renewablefuels/420r07004.pdf>.

³⁵ Adapted from a presentation by Michael Wang, Center for Transportation Research, Argonne National Laboratory at the National Press Club on August 23, 2005.



Any similar effort to evaluate multiple feedstocks (corn, sugarcane, straw, wood chips, slash), transformed into various fuels (ethanol, synthetic natural gas, bio oil, biodiesel) using various conversion processes (biochemical, thermochemical, hybrid bio-thermochemical), while applying various evaluation criteria (lifecycle GHG emissions, nutrient input, water demand, petroleum displacement, etc.) quickly invites even *greater complexity* and the possibility of significant error than the single biofuels pathway demonstrated above. This is particularly true because the factors relevant in bio-feedstock production (nutrient and water demands, soil types, tillage method, and microclimatic factors) vary widely among regions and localities.

The question of “indirect land use impacts” in particular must be cautiously approached. Indirect land use impacts refer to the degree to which U.S. bioenergy production on agricultural land, to the extent that it displaces existing agricultural production, can lead to increased net GHG emissions as a consequence of offsetting agricultural production elsewhere in the world. Because the use of forest derived biomass for energy does not entail the displacement of agricultural lands, forest-derived energy should fare comparatively well in this kind of evaluation. Nevertheless, the methodologies and data needed to do credible analysis concerning indirect land use remain too crude or speculative to be relied upon for accurate lifecycle analysis. Even a well-known agro-ecosystem model such as DAYCENT, in the words of one of its most accomplished users, is “based on thousands of actual field experiments, actual plant and microbial physiology and actual soil-water physical relationships,” yet cannot be relied upon “to draw broad conclusions across a large geographic region about the effect of a particular land use change on the resulting greenhouse gas emissions.”³⁶

For example, in the context of forests, methods are available in the United States to evaluate specific forest stands for carbon uptake and content in specific localities,

³⁶ Dr. Bruce Dale, Michigan State University, Indirect Land Use Thoughts (3/17/08).

cognizant of the specific soil types and tree species present. This does not, however, provide the basis to generalize the conclusions of such evaluations with respect to indirect land use impacts across vast international regions, where methodologies are crude and untested, and where the data are questionable, imprecise, or simply unavailable. Furthermore, LCA of this type generally produces a specific quantitative result, such that it can easily convey a sense of “false precision” to policymakers, who may inadvertently be led to believe that an erroneous result, because it is expressed quantitatively, is somehow “scientific” or “correct.”

For these reasons, EPA should use great care in the use of LCA, acknowledge its current limitations, strive for simplicity and, where possible, provide qualitative rather than quantitative outcomes at appropriate scales. For example, EPA should avoid using currently inaccurate and imprecise methods to derive specific numerical answers with respect to specific GHG reductions through various combinations of feedstocks, fuels, and processes while also considering largely speculative indirect land use change factors. Instead it would be more beneficial to answer the basic questions policymakers have posed, namely whether, as a general proposition, will the expansion of cellulosic biofuels generally reduce or increase lifecycle GHG emissions compared to the use of fossil fuels.

Similarly, for the sake of clarity, simplicity, and sound policy, LCA at this point should focus solely on greenhouse gasses. While it is true that a variety of other factors ranging from nutrient input, water quality, and ancillary impacts have environmental consequences, the consideration of these factors would invite further complexity and distract from the central question of greenhouse gas emissions raised in the EISA.

EPA did a very credible job in its April 2007 Regulatory Impact Analysis for the Renewable Fuels Standard Program.³⁷ The desire to delve deeper into questions such as indirect land use change may be a worthy scientific effort that can, over time, yield improved methodologies and useful data. However, at present, the methodologies and data remain crude or speculative to be relied upon for purposes of rulemaking. Until this changes EPA should rely on the body of work used for its 2007 analysis for the renewable fuel standard.

Finally, NAFO understands that further lifecycle analysis is underway. For example, EPA in conjunction with other federal agencies, pursuant to the recently released National Biofuels Action Plan, is working to define science-based criteria and indicators to assess sustainable production of biofuels across the biofuels supply chains to assist in the evaluation of the environmental performance of biofuels production and use. As part of this effort, a “Sustainability Interagency Working Group” comprised of DOE, EPA, USDA and others will be established to “coordinate Federal activities” and “interface with industry and environmental groups.” NAFO, as an interested and critical stakeholder, respectfully requests an opportunity to fully participate in that process.

³⁷ Regulatory Impact Analysis for the Renewable Fuels Standard Program (EPA 420-R-07-004) (Apr. 2007).

IV. TO THE EXTENT EPA ADOPTS ALTERNATIVE REGULATORY APPROACHES, IT SHOULD CONSIDER GENERATING OFFSET CREDITS FOR RESPONSIBLE FORESTRY PRACTICES.

The ANPR devotes significant discussion to the possibilities of applying alternative market based approaches nationwide to achieve net GHG reductions. Examples include cap and trade programs, rate-based emission credit trading programs, emissions fees, and hybrid options. The policy and legal issues relating to such mechanisms are beyond the scope of NAFO's comments, and NAFO is not taking a position at this time on any particular mechanisms.

At the same time, to the extent regulators and lawmakers consider enacting such alternative market-based mechanisms, we urge them to consider the opportunities responsibly managed forests and harvested wood products contribute to GHG reductions across the nation. As discussed above, most established GHG trading regimes recognize and credit certain forest practices as eligible offsets. There are several important reasons to similarly consider domestic forests and harvested wood products. By generating credits from responsibly managed forests and harvested wood products, and allowing the trading of such credits, both regulators and industry are afforded the greatest possible flexibility in determining how to achieve overall net GHG reductions. For example, while it may not be economically or technologically feasible for a utility to reduce its GHG emissions for several years, acquiring offset credits from a responsibly managed forest could have the dual benefit of both bringing the utility into compliance until it can enact its own GHG controls and encouraging strong long-term forest management practices that further lead to greater GHG reductions. In this way, forests provide an extraordinary opportunity for regulators to create a multi-faceted national program that promotes both immediate and sustainable GHG reductions over the longer term.

V. NAFO AND ITS MEMBERS BRING CRITICAL EXPERTISE TOWARD HELPING REGULATORS AND LAWMAKERS PROMOTE RESPONSIBLY MANAGED WORKING FORESTS TO ADDRESS GLOBAL CLIMATE CHANGE.

NAFO believes that the federal government has a unique opportunity to build upon current efforts and develop a GHG program that incorporates the benefits of what private forests can accomplish in this area. NAFO's members manage more than 74 million acres of private forest lands in the United States. We do so with forest management practices, state-based best management practices, state forestry regulations, and standards that ensure we renew forests that have been harvested and protect ecosystem values. We are able to maintain this important land base due to the economic value of harvested forest products. Protecting the ability to continue generating economic value from these forests will also enable their continued contribution to reducing GHG levels. This includes encouraging the development of new products, such as cellulosic biofuels, that will be needed in a low carbon economy.

With members in all regions of the country working with numerous and diverse forests and the production of harvested forest products, NAFO is uniquely equipped to help regulators and lawmakers develop approaches that recognize the benefits of effective, economical forest management to reduce GHG emissions. As the EPA and other federal agencies work to reduce GHG emissions in the United States, they should

consider opportunities to recognize all sources of potential GHG reductions. Taking full advantage of those sources can best achieve our environmental goals without unnecessarily burdening the United States economy.

Private forest owners have a long history of working with the federal government to create workable solutions for a variety of environmental issues, through regulatory and voluntary programs. For example, Oregon landowners instituted voluntary measures under the umbrella of The Oregon Plan for Salmon that have achieved significant improvements in salmon habitat on private lands. In the South, the forest industry helped initiate the Louisiana Black Bear Conservation Initiative, a long-term, broad-based coalition with the mission of promoting the restoration of the Louisiana black bear (an endangered species) in its historical range through education, research, and habitat management. These are several of many instances where public-private partnerships have produced desirable, mutually beneficial outcomes.

Climate change solutions present policy, technical, and economic challenges. We remain optimistic, however, of the critical role that private forests can play in developing effective climate change solutions. The nation can best resolve these challenges by bringing key stakeholders together to develop solutions collaboratively. NAFO and its members clearly have the requisite policy, technical, and economic expertise to bring to the table. We are ready and willing to do all we can in this effort.

Thank you for this opportunity to provide our views on the ANPR at this critical time in considering GHG regulation. We look forward to further discussion with EPA and other decision makers. Please feel free to contact me at 202-367-1163 to discuss opportunities for NAFO to play its role in developing climate change solutions.

Sincerely,

A handwritten signature in black ink, appearing to read 'David P. Tenny', with a stylized flourish at the end.

David P. Tenny
President and Chief Executive Officer