NAFO | National Alliance of Forest Owners
Investing in the Future of America's Forests

January 25, 2012

Submitted via email

Holly Stallworth, Ph.D.
Designated Federal Officer
EPA Science Advisory Board
United States Environmental Protection Agency
1300 Pennsylvania Avenue, NW
Washington D.C. 20004
stallworth.holly@epa.gov

Re: National Alliance of Forest Owners' Comments to the Science Advisory Board Biogenic Carbon Emissions Panel

Dear Dr. Stallworth and Panel Members:

The National Alliance of Forest Owners (NAFO) welcomes the opportunity to submit these comments to the Environmental Protection Agency's (EPA's) Science Advisory Board (SAB) Biogenic Carbon Emissions Panel (Panel), in advance of its January 27, 2012 conference call to discuss the Panel's *Draft Advisory* on EPA's *Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources* (Sept. 2011) (*Accounting Framework*). NAFO and its members are key stakeholders who contribute to the solutions that private forests and forest biomass bring to lowering greenhouse gas (GHG) emissions and, in turn, are keenly impacted by any controls or regulations on biogenic GHG emissions. NAFO – as the party that filed the Petition for Reconsideration with EPA that led to the present SAB process – is an acutely interested stakeholder in EPA's reconsideration of the treatment of biogenic CO_2 emissions from stationary sources and the scientific analysis EPA will utilize in making ultimate policy and regulatory decisions on how to treat biogenic CO_2 emissions. A detailed summary of NAFO's past participation was included in its October 18, 2011 comments to this

Panel.[1] As we have done from the earliest outset of EPA's review of the treatment of biogenic GHG emissions, we remain prepared to provide our significant scientific, technical, and pragmatic expertise and experience and a considerable body of scientific studies and analyses to assist the Panel throughout its review and evaluation of the *Accounting Framework*.

Summary

As NAFO and its members have explained in earlier comments and presentations to the Panel and EPA, critical to NAFO's mission in reducing GHG emissions is supporting the use of biomass as a renewable energy supply that offers important climate and energy security benefits. EPA's decision to reconsider its approach to regulating biogenic CO_2 emissions from stationary sources offers an opportunity to encourage the continued development of climate-beneficial bioenergy capacity. It is NAFO's goal that, with the assistance of the Panel's expertise, EPA will develop a regulatory framework that accurately reflects the climate benefits offered by bioenergy, encourages its continued development, and promotes appropriate distinctions between bioenergy and other types of energy such as fossil fuel combustion.

While NAFO supports the Panel's ongoing efforts in exploring and attempting to quantify the climate benefits of bioenergy, NAFO is concerned that this review process threatens to introduce undue complexity into EPA's regulation of biogenic CO_2 emissions, which in turn would create significant disincentives for the adoption of bioenergy as an alternative to fossil fuel combustion. While significant scientific analyses may be needed to understand the full scope of the climate benefits of bioenergy, unnecessary complexity is counterproductive to the ultimate goal of providing a workable regulatory framework for biogenic CO_2 emissions. Complex scientific analyses that address questions beyond the scope of the pertinent issues at

[1] National Alliance of Forest Owners' Comments to the Science Advisory Board Biogenic Carbon Emissions Panel (Oct. 18, 2011), *available at* http://yosemite.epa.gov/sab/SABPRODUCT.NSF/MeetingCal/D1D833DBF27626A6852578F600610AC5?OpenDocument

hand risk EPA creating, in turn, an overly complicated regulatory framework. This would frustrate the ultimate goal of deploying biomass as a significant means of reducing net GHG emissions and promoting energy independence. Thus, in these comments, NAFO respectfully offers suggestions for ways in which the Panel can use its scientific expertise to clarify and simplify the *Accounting Framework* that EPA has proposed to further the goal of promoting favorable bioenergy as a viable alternative to fossil fuel combustion. In short, NAFO recommends the Panel:

- Use its expertise to simplify EPA's *Accounting Framework* by identifying general principles that can be applied broadly to the bioenergy sector. To do so, the Panel must address the practical realities of private forest management and the spatial and temporal scales on which it operates.

- Limit its recommendations to the scope of its mandate from EPA and avoid incorporating extraneous factors outside of that scope.

- Maintain its focus on the ultimate goal of this review – to provide scientific assistance to policy makers for the development of a reasonable policy for addressing biogenic CO_2 emissions from stationary sources. The Panel must ensure that its recommendations are both science-based and capable of efficient implementation.

- Acknowledge the practical limits of science and pursue a balance between achieving a reasonable degree of scientific certainty and maintaining reasonable compliance processes and costs. In doing so the Panel must ensure that factors included in its recommendation will ultimately promote rather than discourage the development of beneficial bioenergy facilities.

I. The Panel's Scientific Review Should Aim to Aid EPA in Developing a Reasonable Policy for Addressing Biogenic CO_2 Emissions

At present, there is no debate that, when compared to fossil fuels, biomass can provide important climate benefits as an energy feedstock and that those benefits should be accounted for by treating biogenic CO_2 emissions from stationary sources

differently than fossil CO_2 emissions. This distinction—and the associated climate benefits— is acknowledged in the Panel's *Draft Analysis* and serves as the basis of EPA's decision to defer regulation of bioenergy facilities and to reconsider whether and/or how to account for biogenic CO_2 emissions. In order to capture these climate benefits and create proper incentives for the continued growth of the bioenergy sector, EPA ultimately must design a straightforward and pragmatic policy that is capable of efficient and effective implementation and consistent with the realities of bioenergy production. An unnecessarily complex approach with high compliance costs will create market ambivalence for the bioenergy sector and reduce the sector's ability to produce the climate benefits that it has the capacity to provide. Indeed, if the compliance burdens and costs become too great, a policy intended to promote renewable bioenergy could have the perverse effect of discouraging continued growth of this important industry and the associated environmental benefits.

NAFO agrees with the Panel's assessment that EPA's *Accounting Framework* presents "daunting technical and implementation challenges" as a result of its complexity and also believes that an alternative approach is warranted. *See Draft Report*, at 38. By ignoring the practical realities of the forestry and bioenergy sectors, the *Accounting Framework* incorporates unnecessarily narrow subcategories – such as a regional spatial scale – that lack scientific justification and would complicate implementation. Similarly, the *Accounting Framework* includes many variables that have little, if any, value in quantifying the climate impacts of bioenergy, but would add significant compliance costs if implemented as a part of a regulatory program. Thus, to achieve the goal of a straightforward regulatory framework, we urge the Panel to seek to remove complexity rather than adding to it and prepare recommendations and conclusions EPA can implement through a straightforward approach that that promotes rather than discourages bioenergy production.

While NAFO supports the Panel's overall assessment of the challenges associated with EPA's *Accounting Framework*, we respectfully submit that many of the specific recommendations included in the *Draft Analysis*, if implemented by EPA in a regulatory scheme, would significantly increase complexity and maintain high

transactional costs of compliance while not resulting in benefits that justify such costs. While NAFO addresses some of the specific recommendations offered by the Panel below, on the whole we respectfully believe the Panel would be aided in assessing the appropriate scope of its recommendations by actively engaging the forestry and bioenergy sectors on the practical questions related to implementation. This will allow the Panel to assess fully whether the *Accounting Framework*, or any alternative recommendations from the Panel, can be implemented in an efficient manner and thereby send the proper signals and incentives to encourage climate beneficial bioenergy. In turn, we urge the Panel to not limit itself to an abstract and theoretical analysis of the carbon impacts of the bioenergy sector detached from the pragmatic considerations impacting both the industry and EPA's ultimate policy.

As the *Draft Analysis* correctly notes, case studies are an extremely valuable tool in determining how the *Accounting Framework* or a regulatory program would apply in specific cases. *Draft Analysis* at 33. NAFO agrees that case studies should be based on real-world scenarios and use real rather than illustrative data so that the impacts of alternative approaches can be accurately assessed. *Id.* As the Panel continues to evaluate EPA's *Accounting Framework* and its own *Draft Analysis* and develops recommendations to EPA, we urge the Panel to make use of the case study approach endorsed by the *Draft Analysis* and consider carefully the challenges that arise during implementation.

Specifically, as the Panel continues its review, we urge it to focus on correcting the following examples of unnecessary complexity incorporated into the treatment of biogenic CO_2 emissions from stationary sources leading to significant hurdles and disincentives for pursuing this beneficial form of energy:

- Ignoring the practical realities of the forestry industry and addressing purely hypothetical scenarios that will not occur in practice. For example, there is no need to include parameters that address the harvest of mature trees for energy consumption because their high value for saw timber ensures that they will not be used to produce bioenergy.

- Adding additional detail and complexity that does not affect the final regulatory outcome. Improved accuracy and precision are not ends in themselves and should only be pursued if they produce changes at the relevant policy scale. For example, distinguishing between feedstocks provides no benefit if each sub-category has the same climate impact.

- Incorporating external issues that are beyond the scope of EPA and the Panel's review. For example, economy-wide accounting and Life Cycle Analyses are far beyond the scope of EPA's legal authority under the relevant provisions of the Clean Air Act applicable to the regulation of stationary sources and unnecessary to determine an appropriate policy solution.

- Incorporating complexity to produce marginal gains in accuracy that are exceeded by the high costs of data collection. Calculating climate benefits of bioenergy to the precise levels contemplated in the *Accounting Framework* and *Draft Analysis*, even if feasible, would entail extraordinary and costly requirements with little marginal benefit. The added cost and complexity would have the perverse effect of discouraging bioenergy production.

- Including parameters that cannot be determined to a reasonable degree of certainty. When uncertainty cannot be resolved, the appropriate response is to exclude the parameter and continue to study it until more certainty can be provided. For example the concept of leakage as applied to bioenergy as opposed to more familiar contexts, such as carbon offsets, is unclear and riddled with significant imprecision and should be excluded until it is better defined and understood.

When the Panel identifies unnecessary complexity that will inhibit the development of climate-beneficial bioenergy, we urge it to strive to find ways to eliminate such complexity and promote efficient implementation.

II. The Panel Must Use Both its Scientific Expertise and Knowledge of the Forestry and Bioenergy Sectors to Simplify EPA's *Accounting Framework*

While the Panel is expected to use its considerable scientific expertise and experience to rigorously evaluate the science related to biogenic CO_2 emissions, there is no reason to require analogous complexity in its recommendations. Rather, the Panel should focus on identifying consistent patterns that emerge as it completes its scientific review. As consistent patterns emerge, the Panel will be able to recommend generalized principles that will simplify rather than complicate EPA's *Accounting Framework*. Further, as it searches for such patterns, the Panel must remain mindful of the practical realities of the forestry and bioenergy sectors. By avoiding consideration of hypothetical scenarios that are unlikely to occur in practice, the Panel will be better positioned to discover generally applicable principles that are not evidenced through theoretical *a priori* analyses.

A. An *A Priori* Rejection of a Categorical Exclusion Is Not Warranted

The Panel should strongly resist dismissing out of hand the applicability of a categorical exclusion for biogenic CO_2 emissions even in the event it does not fully adopt the assumption that all biomass combustion is carbon neutral. Rather than making *a priori* judgments, the Panel must engage in a rigorous assessment of the net carbon impact of the bioenergy sector as it actually operates (and is expected to operate in the future). In so doing, NAFO believes the conclusions of the Panel can fairly support a categorical exclusion. For example, it is appropriate for the Panel to become familiar with the processes associated with different feedstocks utilized by bioenergy facilities. At the same time, if the combined carbon emissions of the various feedstocks, when considered at an appropriately broad scale, do not increase net atmospheric CO_2 concentrations, the Panel should recommend that there is no basis to distinguish among feedstocks in an accounting framework. Such a conclusion also provides the Panel a strong basis for recommending a categorical exclusion of biomass from a regulatory regime.

While NAFO believes that a categorical exclusion is appropriate for all applicable feedstocks, the Panel should not consider purely hypothetical feedstocks that have no prospect of being used by the bioenergy sector. At best, such consideration will add complexity to the Panel's review process and, at worst, will insert unnecessary complexity into the regulations themselves. For example, there is no need for the Panel to consider whether there is a unique carbon impact associated with the combustion of whole, mature trees for energy. As the Panel has appropriately recognized, mature forests will not be harvested for energy because they are valued much more highly for other products, such as saw timber. *Draft Analysis* at 29. However, parts of whole trees, (limbs, bark, shavings, and other residues) will likely be used for bioenergy in final harvests as part of an efficient harvest and manufacturing operation. The only roundwood likely to be used directly for bioenergy is immature roundwood from thinning treatments, a practice that typically increases overall carbon sequestration rates of the remaining trees. While the harvest of whole, mature trees for energy has generated much debate and opposition, a careful analysis of the practical realities of the forestry and biomass sectors show that this issue is a red herring. Rather than designing a framework that addresses this abstract and hypothetical situation, the Panel can simplify its analysis and the *Accounting Framework* by focusing on the types of feedstocks that will actually be used for bioenergy.

B. The Panel Must Focus Its Analysis on Appropriate Spatial and Temporal Scales

In the same manner, general trends are likely to be observed if the Panel focuses its analysis on appropriate spatial and temporal scales. Indeed, many of the complications evident in the *Accounting Framework*, the *Draft Analysis*, and comments submitted to EPA and the Panel are based on distinctions that are not relevant when appropriate spatial and temporal scales are adopted. For example if the Panel focuses on spatial scales that are relevant to how the carbon cycle functions (e.g., changes in net overall atmospheric CO_2 concentrations over time) the many concerns related to short-term fluctuations in carbon stocks disappear. It is no accident that the ages of forests tend to be evenly distributed along a continuum. Forests are managed to meet an ongoing demand for goods, services and uses, and this requires a predictable

continuation of a productive forest land base. Assessing individual stands outside of the broader context in which they are managed can produce misleading results. For example, concerns over short-term fluctuations in carbon stocks raised by Cherubini *et al.* (2011) and Walker *et al.* (2010) are based on this type of stand-based accounting. While the "snap-shot" approach offered by these methodologies may have value in describing how individual carbon molecules cycle between different carbon pools over time, it creates an arbitrary spatial distinction that is not representative of how the forestry and bioenergy sectors affect the overall forest carbon cycle. Instead, as individual "snap shots" from different stands are aggregated into appropriate spatial scales that represent the carbon flux associated with a forest landscape, the small, short-term fluxes in carbon emissions are balanced and the net changes in CO_2 concentrations attributable to bioenergy approach zero. Using the bank account analogy, when considered at the proper spatial scale, it becomes clear that the entire forestry sector – including bioenergy – maintains a consistent level of carbon capital in the forest and only harvests a portion of the accrued interest.

Similarly, adopting an appropriately broad temporal scale can greatly simplify accounting for biogenic CO_2 emissions. As the Panel has recognized, the global climate system is insensitive to intermediate changes in carbon stocks that occur on timeframes shorter than 100 years. *Draft Analysis* at 11. Yet many of the concerns over the climate impacts of biomass involve changes that occur over much shorter timeframes. Moreover, forests are universally managed on rotation cycles that are shorter than 100 years, meaning that the global climate system is insensitive to changes in carbon stocks that occur during the harvest and regeneration cycle. Thus the Panel is correct when it notes that, even if valid, concepts addressing short-term carbon fluxes such as "carbon debt" are irrelevant due to the time scale on which climate responses occur. *Draft Analysis* at 11.

By recognizing the importance of maintaining a broad temporal scale on the order of 100 years, the Panel can avoid complicating its recommendations through the inclusion of components that address proximate changes in biogenic CO_2 emissions over shorter timeframes. Rather than incorporating short-term models of emissions

fluxes such as Cherubini *et al*.'s GWP_{bio} Index and the time path of decay of emissions into an accounting framework, the Panel's recommendations should focus on changes in cumulative biogenic CO_2 emissions over policy-relevant 100-year time frames. Again, assessing short-term carbon fluxes may be a valid part of the Panel's scientific assessment of biogenic CO_2 emissions, but it should not be a part of its final recommendations to EPA.

III. The Panel Should Avoid Incorporating External Factors Outside the Scope of EPA's Regulatory Review

As the Panel has correctly observed, its scientific review and ultimate recommendations are constrained by the scope of the regulatory review that EPA has undertaken. As a legal and policy matter, EPA has chosen to limit its review to an "examination of the science and technical issues associated with biogenic CO_2 emissions from stationary sources." EPA, Deferral for CO2 Emissions from Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs (Deferral Rule), 76 Fed. Reg. 43,490, 43,490-91. While the Panel has correctly noted that EPA has left many important policy issues unanswered in its *Accounting Framework*, the Panel must be responsive to the boundaries of the questions presented by EPA. The purpose of EPA's review is to determine whether biogenic CO_2 emissions from stationary sources have different impacts on atmospheric CO_2 concentrations than fossil CO_2 emissions, meaning that the regulatory framework must allow, to the extent possible, a direct comparison between the climate impacts of biomass and fossil fuels. Incorporating additional factors will not further EPA's policy objectives and, instead, will unnecessarily complicate the *Accounting Framework*.

A. Greenhouse Gases Other than CO_2

Under the Deferral Rule, EPA has limited the scope of this review and its future regulation of bioenergy stationary sources to CO_2 emissions. As EPA stated in the *Accounting Framework*, carbon-based GHGs are unique because carbon can "cycle between different reservoirs in the atmosphere, ocean, land vegetation, soils, and sediments." *Accounting Framework* at 9. While the production of biomass and fossil

fuel energy may result in some emissions of other GHGs, EPA has made a policy decision to focus on the carbon cycle and its role in reducing the climate impact of carbon-based GHG emissions from bioenergy facilities. Regardless of whether or not the Panel agrees with this direction, it should not expand the scope of its review or recommendations to incorporate emissions of other GHGs. While including emissions of N_2O and other non-carbon GHGs may be appropriate when quantifying GHG emissions by conducting a lifecycle analysis, EPA has expressly foreclosed this approach. Indeed, as the *Draft Analysis* suggests, including the emissions of other GHGs through a lifecycle analysis would prevent EPA from comparing the climate impacts of biomass and fossil fuels. *Draft Analysis* at 12-13. Recommending factors that have been explicitly excluded by EPA will be counterproductive because they are not responsive to EPA's charge, introduce confusion, and will inevitably be excised from EPA's final regulations.

B. Upstream and Downstream Emissions

Similarly, EPA's review is limited to stationary sources and the Panel should ensure that appropriate comparisons between bioenergy and fossil fuel facilities can be made. While differences between biogenic and fossil carbon dictate inclusion of carbon *sequestration*, there is no basis to include additional upstream and downstream *emissions*, which are not included in the regulation of fossil fuel facilities. For example, the Panel has appropriately recognized that it is inconsistent to account for transportation losses for biomass facilities, while ignoring fugitive emissions from natural gas pipelines. *Draft Analysis* at 26. For the same reason, it would be inconsistent to account for downstream emissions from co-products such as ethanol or paper when comparable emissions are ignored for fossil fuel facilities. While the Panel may prefer a more comprehensive accounting framework associated with the life cycle of all forest products, including those used for bioenergy, it should not go beyond the reach of the questions presented by EPA, which in turn are linked to EPA's regulatory authority.

C. Environmental Co-Benefits

By the same token the Panel must ensure that its recommendations do not inadvertently suggest that policy should require bioenergy facilities or their suppliers to provide unrelated environmental co-benefits as a condition for receiving credit under the PSD and Title V programs for the climate benefits that they provide. Thus the broad suite of environmental benefits addressed by forest certification and forestry best practices programs make them inappropriate proxies for establishing "sustainability" in the context of net atmospheric CO_2 impacts. While NAFO members are committed to third party verification of sustainable practices and recognize the value of these programs, they are designed to produce a variety of environmental benefits, such as biodiversity and clean water, that are outside the scope of the regulatory program where the *Accounting Framework* will be applied. Although production of these environmental benefits is a worthy goal and should be rewarded in an appropriate context, it should not be a precondition for recognition under the PSD and Title V programs.

Similarly, the Panel and EPA should resist the urge to make distinctions among feedstocks based on factors unrelated to climate impacts. In many cases concerns about bioenergy are based on perceived impacts of forestry practices on biodiversity, water quality, or aesthetics. Preferences for older forests and natural landscapes should not play a role in the Panel's review and recommendations unless they are directly related to changes in atmospheric CO_2 concentrations. While forests without question provide many benefits, EPA has limited this review to climate benefits and the Panel must respect the policy decision that EPA has made.

IV. The Panel Should Acknowledge the Limits of Science and Avoid Recommending Parameters that Increase Compliance Costs and Regulatory Uncertainty Without Commensurate Gains in Accuracy and Precision

Finally, as it conducts its scientific review and formulates its recommendations, the Panel must remain cognizant of its ultimate objective, which is to aid EPA's policy-making process. This is particularly important as the Panel considers uncertainty. As a general matter, scientifiic research is designed to reduce uncertainty (and thereby

improve accuracy and precision), often through increasingly detailed and complex studies. While detailed analyses can be extremely important in advancing scientific understanding, they do not necessarily improve policy outcomes or the implementation of regulatory programs. Rather than simply pursuing greater detail and developing finer distinctions, we urge the Panel to consider whether its recommendations will allow EPA to create better policies.

In some cases, rigorous and detailed analyses can only be realized through an exponential increase in the cost of collecting detailed data. In instances where data collection is infeasible because compliance costs exceed marginal benefits in accuracy and precision, these marginal improvements become counterproductive from a policy standpoint and should be avoided. While ultimate policy decisions must be made by EPA, the Panel should take into account the pragmatic challenges and costs associated with its recommendations and avoid recommending complex approaches that will result in disproportionate increases in compliance costs. In other cases, the Panel may find that due to the inherent complexity of forestry and the forestry industry, it cannot resolve uncertainty and provide sufficiently accurate measurements for certain paramaters of interest. Rather than seeking complex ways in which to incorporate these uncertain parameters, the Panel must inform EPA that current scientific limitations have been exceeded. EPA can then make an appropriate policy decision of how to proceed in the face of such uncertainty. In some cases, an alternative approach may be taken and in others EPA may simply choose to monitor a parameter of interest in the hope that uncertainty can be resolved as scientific understanding improves.

A. Facility-Based Chain-of-Custody Accounting

As the Panel and many commenters have stated, facility-based chain-of-custody accounting can, in theory, be used to measure the changes in atmospheric CO_2 concentrations attributable to each bioenergy facility. Yet, when the transactional costs associated with collecting the necessary data are considered, it becomes apparant that the costs greatly overwhelm the marginal improvements in measuring changes in atmospheric CO_2 concentrations. Bioenergy facilities procure feedstocks from a vast

and constantly changing array of land-owners as well as other entities in the forestry sector. The logistics of precisely tracking feedstocks from harvest to combustion would impose significant new costs on the bioenergy sector and would threaten its cost-effectiveness when compared to fossil fuel combustion. Thus, while a facility-based chain-of-custody accounting approach may, in theory, accurately measure the climate benefits of bioenergy, the costs assosiated with its implementation would prevent those benefits from being realized. Rather than adding cost and comlexity for the sake of marginally improved accuracy, the Panel must consider whether increased accuracy is necessary and worth the transactional costs of compliance. In the case of facility-based chain-of-custody accounting an honest assessment will lead to the conclusion that the high compliance costs simply cannot be justified.

B. "Business As Usual" Baseline

Complexity is also a critical issue that must be considered as the Panel makes recommendations for the baseline in EPA's *Accounting Framework*. Errors in baseline measurements pose a significant risk to the success of EPA's policy as they have the potential to send unintended signals to the marketplace and create perverse incentives that discourage climate-beneficial bioenergy facilities. The "Business as Usual" (BAU) baseline included in the Panel's *Draft Analysis* poses exactly this type of risk. The Panel's recommended approach requires calculating "what would have happened anyway" without any biomass consumption by the bioenergy sector. *Draft Analysis* at 5. The Panel recognizes that such projections would be uncertain, *id.* at 5, and highlights a number of drivers that will complicate future projections including "economic conditions, domestic and international policy and trade decisions, commodity prices, and climate change impact." *Id.* at 25. In addition to these macro-scale variables, exogenous factors such as land use change and natural disturbances including fire and disease will have a significant influence on future carbon stocks, but are difficult to predict *ex ante*. Finally, bioenergy's role within the forestry sector as a whole is extremely difficult to isolate and remove from future projections. In many cases, other forestry products are co-produced with bioenergy and, in any event, forest productivity investments are made

far in advance of harvest as land managers anticipate future market demands.[2] Sedjo (forthcoming). Imposing a BAU baseline requirement may also result in an unintended regulatory taking by requiring that an existing net carbon sequestration trajectory must be maintained going forward, thereby affecting the value of additional carbon for other purposes in the marketplace.

As a result of this inherent complexity, it is difficult to assess with any certainty the precise path that carbon stocks will take in the future, let alone the hypothetical path that would occur in the absense of bioenergy. Rather than allowing EPA to "isolate the incremental or additional impact of the bioenergy facility," *Draft Report* at 24, a projected BAU baseline will simply reintroduce uncertainty based on a host of factors outside of the bioenergy sector's control. Regardless of its incremental impact on atmospheric CO_2 concentrations, a bioenergy facility's regulatory obligations could change simply because EPA's projections of other factors proved incorrect. Even if the Panel is correct in asserting that additionality is an important concept for EPA to consider, it must acknowledge that a projected BAU baseline cannot be accurately measured and will likely produce perverse regulatory results unrelated to the climate impact of bioenergy. In light of this uncertainty, the Panel must provide a thorough assessment of the state of the science related to baselines that will allow EPA to make an informed policy choice.

C. Leakage

Measurement of leakage suffers from the same problems of uncertainty. Although EPA identified leakage as an issue of concern in the *Accounting Framework*, it did not attempt to quantify leakage, due in part to the uncertainty surrounding it. *Accounting Framework* at 41. Instead EPA suggested that leakage could be incorporated at a later date once its impact was better understood. *Id.* The *Draft*

[2] Given the interrelated nature of the forestry sector and the fact that significant investments have already been made in anticipation of bioenergy demand, it would simply be unfair to apply a BAU baseline to the bioenergy sector. Forest owners have been providing significant carbon benefits over time by increasing carbon stocks on the lands they manage. They should not be required to maintain that rate of growth without compensation and only receive credit for "additional" sequestration beyond what they already provide.

Analysis confirms the uncertainty surrounding the measurement of leakage, noting that while non-zero leakage is plausible it could be positive or negative. *Draft Report* at 18. Indeed, it states that "the precision associated with qualitativlty estimating negative leakage may involve huge errors that could be so great as to overwhelm any usefulness of the development of high quality data for other interrelated parts of the assessment." *Id.* at 19. In the face of such uncertainty, it is simply not appropriate to include this factor in an Accounting Framework at this time. If, as the Panel has suggested, there is uncertainty even as the appropriate sign for leakage, its inclusion will almost certainly lead to perverse effects that will distort the bioenergy market and disrupt the development of climate-beneficial bioenergy faciliites. Rather than recommending that EPA incorporate some proxy for leakage based on its best guess as to what may occur, the Panel should cite the existing uncertainty and recommend that EPA exclude leakage until it can be better understood and quantified.

Conclusion

NAFO continues to support EPA's decision to seek an independent peer review of its proposed accounting methodology for biogenic CO_2 emissions and applauds the Panel's efforts to assess this complex field. We urge the Panel keep implementation at the forefront as it formulates its recommendations to EPA and to strive to add clarity rather than complexity to the *Accounting Framework* that EPA has proposed. NAFO is standing by to provide further information or answer any questions that the Panel may have.

Respectfully Submitted,

David P. Tenny
President and CEO
National Alliance of Forest Owners