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October 20, 2009

Representative Henry Waxman, Chairman
Representative Edward Markey
Committee on Energy and Commerce
House of Representatives
2515 Rayburn House Office Building
Washington, D.C. 20515-6115

Dear Sirs:

We note with great interest your October 2, 2009 letter to EPA Administrator Jackson requesting clarification of the modeling that is “informing” the public debate on federal climate change legislation. The modeling is set forth in the report entitled, EPA Analysis of the American Clean Energy and Security Act of 2009, H.R. 2454 in the 111th Congress (the EPA report). Your letter seeks to put the “model results in appropriate context.”

We have studied the models and the EPA report and write to bring to your attention **a significant and substantial flaw resulting in a failure to account for the carbon dioxide emissions from the power plants that combust biomass to generate electricity.**

At the current juncture in the climate legislation deliberations, the Senate may not merely rely on the EPA report as a basis for climate legislation but must instead resolve the underlying biomass loophole. A failure to address this loophole will prevent the proposed Senate climate legislation from achieving its goal of reducing U.S. greenhouse gas emissions.

1. CEJAPA is based on EPA modeling that omits biomass power plant emissions totaling at least 10% of U.S. greenhouse gas emissions in 2020.

The analysis in the EPA report, and the models it is based on, which were generated by the EPA and others (including the Congressional Research Service and the Energy Information Administration) is based on a flawed assumption about biomass power production. This flawed assumption is stated in as follows:

“Combustion of biomass emits greenhouse gases....[but] the CO₂ emissions from these activities are not included in the national emissions totals. ***It is assumed*** that the C released during the consumption of biomass ...causes no net addition of CO₂ to the atmosphere.” (emphasis added)¹

In fact, biomass burning causes a net addition of CO₂ to the atmosphere and therefore this “assumption” is without basis in fact.² Reliance on the erroneous assumption that biomass burning adds “no net addition of CO₂ to the atmosphere” results in a fatal flaw in the applicability of all of the models to what will be the reality in 2020 if the goals of the Clean Energy Jobs and American Power Act (CEJAPA) are met. This flaw is reiterated in EPA, EIA, United States Department of Agriculture, and CRS analyses, or lack thereof, of biomass combustion.³ Most importantly, this flaw has been incorporated into and made a premise of the regulatory schema of each of the recent Congressional climate change bills. See, CEJAPA, the American Clean Energy Leadership Act of 2009 (ACELA, Senate Report 111-48) and the American Clean Energy and Security Act (ACESA) H.R. 2454.

Incorporating this assumption into CEJAPA and ACELA implies that “renewable energy” is the same as “clean energy.” In the case of biomass, the two are not synonymous. *Under CEJAPA and ACELA, the carbon dioxide emissions*

¹ <http://epa.gov/climatechange/emissions/downloads09/Energy.pdf>

² Johnson, E: “Goodbye to Carbon Neutral” Environmental Impact Assessment Review, 2008; EPA Proposal for Endangerment Finding, 74 Fed. Reg. Vol. 18899 [enclosed] and accompanying Technical Support Document April 17, 2009; Carlin, A, “Why a different Approach is Required”, Wm & Mary Env'tl L. & Policy Review, 32:685; Matthews, H. D. & Caldiera, K, “Stabilizing Climate”, Geophys Res Let 35:4705, 2/27/2008.

³ It is incontrovertible that burning wood and other biomass to generate electricity is “dirtier” than the combustion of coal. [enclosed plant data chart] & www.massenvironmentalenergy.org (analysis of permit applications of proposed wood burning biomass plants.)

from biomass burning power plants are both exempt from being counted and not included under the cap. Since they are exempt, this is then used to justify granting renewable energy credits (RECs) to biomass burning power plants, directly subsidizing the production of energy that is both more expensive than, and “dirtier” than coal.

The incorporation of this false unsubstantiated assumption into multiple models, including all the analyses examined in the CRS report R40809 Climate Change: The Costs and Benefits of the Cap and Trade Provisions of H.R. 2454, and the six models used in the EIA analysis, Energy Market and Economic Impacts of H.R. 2454, The American Clean Energy and Security Act of 2009 SR/OIAF/2009-05, results in negative environmental and public health impacts of staggering proportions. For example, if the renewable energy targets for 2020 under H.R. 2454 are met⁴, the resultant 70 gigawatts of biomass power production will result in the emission of at least 700,000,000 tons of carbon dioxide that year and every year thereafter.

Given the provisions in H.R. 2454, therefore, the 700,000,000 tons of CO₂ emitted in 2020 will be in “excess” of the official cap set by the number of allowances (5056 MtCO₂e) in H.R. 2454. *That means that the unregulated biomass carbon dioxide emissions would be “an addition” 13.8% above the total allowance cap, and approximately 12.2% of the total emissions in the nation for the year 2020 if the cap targets are met.*

That 700,000,000 tons of CO₂ cannot be ignored if the Congress is serious about passing legislation that will effectively address climate change.⁵

⁴ http://www.eia.doe.gov/oiaf/analysispaper/biomass/figure_4.html [enclosed]

⁵ The provisions of the law which allow this to happen are as follows:

(1) Exemption of biomass combustion emissions from being counted: CEJAPA, § 700 (13)(A), Definitions, p. 686, defines a covered entity as “Any electricity source”. However, CEJAPA, § 722, p. 578, (Prohibition of Excess Emissions)(b)(1) states:

ELECTRICITY SOURCES.—For a covered entity described in section 700(13)(A), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such covered entity emitted in the previous calendar year, excluding emissions resulting from the combustion of—

- (A) petroleum-based or coal-based liquid fuel;
- (B) natural gas liquid;
- (C) renewable biomass or gas derived from renewable biomass;** or
- (D) petroleum coke. (emphasis supplied)

The effective cap is the number of allowances allowed, on page 568 Section 721 [Emission allowances] (e)(1)says in 2020 that would be 5056 MtCO₂e. That sets the total allowed CO₂ emissions for the country—but since biomass combustion is not required to get allowances they will not be included.

This false assumption that biomass combustion is carbon neutral has been defended by proponents by saying that the “trees will grow back” or that the emissions are “biogenic”, one of the biggest red herrings of all time. Unfortunately for the planet, the trees do not grow back fast enough and the problem is actually worsened since newly planted trees are net carbon emitters for the first 10-20 years. The EPA Endangerment Ruling proposal [Fed. Reg. Vol. 74, P 18899--enclosed] stated “for a given amount of CO₂ released today, ... a further 30 percent will be removed over a few centuries, and the remaining 20 percent will only slowly decay over such time such

(2) Biomass emissions not included under the cap limitations:

In regards to what would seem to be the logical assumption/assertion that the EPA models did account for carbon emissions of biomass in setting the cap numbers, the actual number is not set by any of the models, all of which actually greatly exceed the “cap” as presented in SR/OIAF/2009, but through a mechanism as stated in the language below.

CEJAPA, § 700(8), p. 685 states:

CAPPED EMISSIONS.—The term ‘capped emissions’ means greenhouse gas emissions to which section 722 applies, including emissions from the combustion of natural gas, petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid to which section 722(b)(2) or (8) applies.

As noted in this footnote 5 above, § 722, p. 578 of CEJAPA (Prohibition of Excess Emissions)(b)(1), excludes biomass burning.

ELECTRICITY SOURCES.—For a covered entity described in section 700(13)(A), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such covered entity emitted in the previous calendar year, excluding emissions resulting from the combustion of—

- (A) petroleum-based or coal-based liquid fuel;
- (B) natural gas liquid;
- (C) renewable biomass or gas derived from renewable biomass;** or
- (D) petroleum coke.

that it will take many thousands of years to remove from the atmosphere.” Moreover, while the total amount of carbon in the biosphere is fixed, the percentage of that carbon which is in the atmosphere in the next twenty to thirty years will be the number that counts—and every CO₂ molecule has an effect, whether it came from the combustion of fossil fuel or it is “biogenic”. The EIA numbers indicate that the burning of biomass incentivized by H.R. 2454 and provisions of ARRA will produce a human caused spike that is not “natural/biogenic” and will have significant impacts for centuries.

There are multiple other examples in federal regulatory programs that could be cited where the incorporation of this false assumption has led to inaccurate conclusions by distorting models and subsequent analysis. One recent example is the BCAP (Biomass Crop Assistance Program)⁶. The enclosed comments from NRDC on the DPEIS on BCAP are illustrative⁷. (See highlighted comments on biomass). In examining the proposal and the data behind it, we believe that all the comments by NRDC are accurate. The specifics are less important, however, than the repeated statements characterizing the analysis in regards to biomass: “faulty or unsubstantiated assumptions”, “assumption is both unexamined and unjustified”, and “similarly assumed away”.

Certainly the models used by EPA and others need to count the significant emissions of carbon dioxide and other criteria pollutants that result from the combustion of wood and other forms of biomass. Science demands that EPA revise the models and as a result the projections by the Congressional Research Service would be more accurate. Effective legislation, however, does not have to be delayed waiting for the often time consuming revisions of models and analyses. To address the issue does NOT require a major re-writing of the language of the bill, including definitions of biomass, renewable sources, etc. The language of the bill can close the “biomass loophole” by measuring and counting the smokestack carbon dioxide emissions of biomass combustion and making the power producers accountable for those emissions. Substantiated by the science, provisions of the legislation will then make the awarding of renewable energy credits be based on the production of “clean” energy, regardless of the fuel source. We are including

⁶ Biomass Crop Assistance Program, USDA Farm Service Agency, July 2009

⁷ Testimony of David G. Hawkins, Director of Climate Programs, NRDC before Senate Environment and Public Works Committee July 7, 2009; “The Giving Trees” by Sharon Levy in On Earth Magazine from NRDC Spring 2008 [both enclosed].

with this letter a proposed amendment to close the biomass loophole and to ensure that the Senate climate bill is not based on faulty models. This will:

- (1) save ratepayers from paying for more expensive energy,
- (2) mean that taxpayers will not be seeing hundreds of billions of dollars squandered in a series of poor investments incentivizing a power source that is “dirtier” than coal,
- (3) enable money to be invested in research and production facilities to realize real clean energy capacity that will produce more jobs than operating the biomass plants, and
- (4) produce immediate reductions in emissions that will ease the climate crisis.

We want to assure you that we have made every attempt to ascertain the factual basis of EPA’s assumption that burning biomass makes no “net addition of CO₂ to the atmosphere.” This included attempts to obtain from U.S. EPA relevant documentary evidence including scientific reports via a Freedom of Information Act request to EPA on August 24, 2009, and acknowledged by EPA on August 25 [FOIA HQ-01887-09]. The documents sent by EPA in response did not contain any scientific studies or any factual basis that justifies the “assumption” of biomass combustion carbon neutrality.

Finally the publication of the article by the Princeton group last week [enclosed] states that biomass combustion is not carbon neutral, further underlined by the publication of a statement by Dr. Hamburg, Chief Scientist of the Environmental Defense Fund, and others acknowledging an “error” in long held carbon accounting procedures [enclosed].

Very truly yours,

William Sammons, M.D.
Board Certified Pediatrician
Subspecialty Certified in Behavioral and Developmental Pediatrics

Co-signers:

Rachel Smolker, Ph.D., Co-Director, Biofuelwatch
Alan Muller, Director, Green Delaware

Enclosures:

EPA Proposed Endangerment Finding Fed. Reg. 74, P18899
Plant data chart—comparison of emissions from biomass plants to
coal and natural gas
EIA projection of biomass combustion power generation in 2020
NRDC comments on BCAP
Testimony (excerpt) from David Hawkins of NRDC
“The Giving Trees” Spring Issue of “On Earth” Feb 2008
“Fixing a Critical Climate Accounting Error”, Searchinger, T, et.al.,
Science 326:527, October 23, 2009
“Tallying Biofuels Real Environmental Costs”, Time Magazine

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