Public Comment

for February 22, 2016
RCEA Board of Directors Meeting

January 26, 2016

Re: Humboldt County Community Choice Aggregation

Redwood Coast Energy Authority:

Thank you for your ongoing efforts in the community to lead, coordinate and integrate regional efforts that advance secure, sustainable, clean and affordable energy resources and to support research, development, demonstration, innovation, and commercialization of sustainable energy technologies by public and private entities operating in Humboldt County.

A group of students and faculty at Humboldt State University comprise an organization called the Sustainability Coalition. We comprise a variety of clubs and majors with a shared goal of helping create a more sustainable community by reducing greenhouse gas emissions and promoting programs, policies, and infrastructures that uphold values such as environmental responsibility and justice.

It is our pleasure to offer our support for the Redwood Coast Energy Authority's pursuit of a Community Choice Aggregation program for Humboldt County. This program not only aligns with our university's, club's and students' values and livelihoods, but this is also an important opportunity to act as a model for other communities. This is the first step towards providing future generations with a clean, renewable energy system.

Best regards,

The Humboldt State University Student Sustainability Coalition

Alec Howard, Student & Associated Students Representative to the Climate Action Committee
Aisha Cissna, Student & Student Sustainability Co-Chair, Representative to Climate Action Committee
Meredith Garrett, Waste Reduction and Resource Awareness Program
Madison Whaley, Student & Waste Reduction and Resource Awareness Program
Aaron L. Cobas, Student & Waste Reduction and Resource Awareness Program
Molly Daly, Student & Green Campus Club
Moussa Sy, Resident Sustainability Advisor
Casey Novell, Student & Green Campus Club
Ivan Soto, Student & Environmental Studies Club treasurer
Tessa Lance, Student & Waste Reduction and Resource Awareness Program

Package for RCEA Meeting - February 22nd 3:15pm
Presented by Damon Owen, President of Climate HSU

Packet Includes:

1. The Reason for All of This
    a. AB 32 is the reason for the change in California's energy future.
    b. There are key highlights of what this bill aims to do. I am bringing this forward as it should be the backbone of AB117 - Community Choice Aggregation.
2. Ordinance - 2016-01 - RCEA's Authorizing of CCA
    a. Attached are questions for the board, on the connections of RCEA's energy plans and how they align with AB32.
3. What is Biomass
    a. Explains some key points about burning biomass.
    b. Shorten version of Woody Biomass Incineration.
4. Woody Biomass Incineration
    a. Sited data about the realities of burning biomass.
5. Biomass Facility - California Air Quality - Lawsuit

Reasons for Speaking Today

1. Asking for release of reports-
    a. Emissions
        i. Past impacts of local biomass burning
        ii. Impacts of running all of Humboldt's Biomass facilities
        iii. Chemical and toxic emissions from burning biomass
        iv. The reports on increased emissions from biomass jobs created
            1. with 150-300 new jobs from biomass creation, all of these jobs are pollution extensive positions.
            2. This plan adds more trucks and logging equiptment in our local air zone, what will the impact of these jobs be in comparison to other options
    b. Environmental Impact
        i. What is the impact of these different options on our environment.
        ii. Many lawsuits around biomass plants and air quality, what is the proposed plan for these possibilities.
        iii. Compare and contrast the different options and how they will reduce GHG.
            1. This is the purpose of AB 32 and I haven't found this data in the reports.
    c. Economic Future
        i. Why the board would choose more expensive biomass over cheaper and cleaner renewables.
        ii. How the board plans to deal with increased carbon taxes for future.
            1. When carbon taxes increase and timber loopholes on carbon pollution tighten, what will happen to the price of fuel.
2. More Transparency
    a. Dates and deadlines
    b. Release of plans to public
3. Public Involvement
    a. Asking for meetings, with actual plans on proposals, with decision makers, at a time suitable for public.

The Real Reason for All of This

California Environmental Protection Agency

- **AB 32, the California Global Warming Solutions Act of 2006,**
  - reporting and verification of emissions of greenhouse gases and to monitor and enforce compliance with the reporting and verification program,
  - requiring in law a sharp **reduction of greenhouse gas (GHG) emissions,**
  - **long-term approach to addressing climate change,** and does so in a way that aims to improve the environment and natural resources while maintaining a robust economy.
  - must adopt regulations to achieve **the maximum technologically feasible and cost-effective GHG emission reductions.**

What Gases or Compounds are Covered Under AB 32?

AB 32 includes the major GHGs and groups of GHGs that are being emitted into the atmosphere. These gases include:

1. Carbon dioxide (CO_2)
2. Methane (CH_4)
3. Nitrous oxide (N_2O)
4. Hydrofluorocarbons (HFCs)
5. Perfluorocarbons (PFCs)
6. Sulfur hexafluoride (SF_6)
7. Nitrogen trifluoride* (NF_3)

It will also **improve public health**, and will be an important element of California's climate change program strategy.

Other Key Bills and Policies in California Address Climate Change

- Assembly Bill 1493 (Pavley, Chapter 200, Statutes of 2002) – GHG Standards for Passenger Vehicles
- Senate Bill 375 (Steinberg, Chapter 728, Statutes of 2008) – Sustainable Communities - Public Transportation
- Senate Bill X1-2 (Simitian, Chapter 1, Statutes of 2011) – Renewables Portfolio Standard
- Assembly Bill 341 (Chesbro, Chapter 476, Statutes of 2011) – Commercial Recycling
- Senate Bill 535 (De León, Chapter 830, Statutes of 2012) – Disadvantaged Communities
- Governor's Executive Order S-3-05 – 2050 GHG Reduction Goal
- Governor's Executive Order B-16-12 – Goal for Plug-In Vehicles
- Governor's Executive Order B-18-12 – Energy Efficiency of State-Owned Buildings

ORDINANCE NO. 2016-01

AN ORDINANCE OF THE BOARD OF THE REDWOOD COAST ENERGY AUTHORITY (RCEA) AUTHORIZING THE IMPLEMENTATION OF A COMMUNITY CHOICE AGGREGATION PROGRAM BY RCEA AS THE COMMUNITY CHOICE AGGREGATOR

1. Section 1, part B - States
    a. "The Redwood Coast Energy Authority (RCEA) was created… for the promotion.... and advance the use of clean, efficiency and renewable resources available in the region."
        *i. **Can the board present me with the information showing how our new plan will provide a "clean" future?***
        *ii. **Can the board show me emissions data from the different energy options?***
        *iii. **Can the board show me the emissions data reports from the jobs created by each sector?***

2. Section 1, part C -
    a. with the goals of providing overall rates that are lower or competitive and to provide an energy portfolio that prioritizes the use of local renewable resources, including existing facilities, to the maximum extent technically and economically feasible through a community choice aggregation (CCA) program.
        i. These don't seem to be the intended goals of AB 32.
            1. The goals of AB 32 - California Global Warming Solutions Act of 2006
                a. reporting and verification of emissions of greenhouse gases and to monitor and enforce compliance with the reporting and verification program,
                b. requiring in law a sharp **reduction of greenhouse gas (GHG) emissions,**
                c. **long-term approach to addressing climate change,** and does so in a way that aims to improve the environment and natural resources while maintaining a robust economy.
                d. must adopt regulations to achieve **the maximum technologically feasible and cost-effective GHG emission reductions.**
        *ii. **Can the board review its goals, and/or explain how the goals of RCEA align with the goals of our state, AB32 and future 2050 values?***

3. Section 1. Part E
    a. RePower Humboldt to lead a community-wide effort to define a vision and strategic plan for increasing energy independence and energy security in Humboldt County.
        *i. **Can the board show me how this plan matches with AB32?***
        *ii. **Can the board show me the data reports on how these different plans meet our future requirements for AB32 and the future 2050 goals?***
        *iii. **Can the board show me the response of the public, or how the public has been involved in the discussions?***

4. Section 1. Part F
    a. To assist in the evaluation of a CCA program within Humboldt County, RCEA staff has made multiple presentations about a potential CCA program to the Humboldt County Board of Supervisors, member agency City Councils, interested community organizations and interested members of the public.
        i. These meetings, went over the RePower Humboldt webpage and reports. The public has not received any real proposals, or has the public been able to speak to people that are important to the decisions.
        *ii. **The public is asking the board for community involvement, (a) with the actual proposals of the plans, (b) with the voting board members, (c) at a time that the public can make?***

5. Section 1, Part H, Section 1
    a. The public would like for the technical analysis to be completed before procedure "including load study and rate forecast, rate analysis, supply scenarios for CCA, economic impacts, impacts on current solar customers, and sensitivity analysis;
        *i. **What will the environmental impacts of these different options be?***
        *ii. **How much "scrap" biomass is available and how long will it take to burn through scraps and turn to harvesting of trees for fuel?***

What is Biomass

1. Burning biomass pollutes the air
    a. with more ppm's of pollution than burning coal & natural gas fossil fuels.
    b. The EPA identified over 250 individual organic compounds dispersed into the air from burning wood.
    c. Burning biomass emits 150% of CO2 per Megawatt hour of power produced more than Coal
    d. Burning biomass emits 250% of CO2 per Megawatt hour of power produced more than Natural Gas
1. Burning biomass emits particulate matter (PM), nitrogen oxides (NOX), carbon monoxide (CO), carbon dioxide (CO2), sulfur oxides (SOX), toxic heavy metals (such as arsenic, mercury, lead, cadmium and chromium), acid gases, dioxins and furans, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), other hazardous air pollutants (HAPs), and even radioactive pollutants.
2. A typical 50 megawatt biomass incinerator permitted between 2008 and 2012 has expected annual emissions of 230 tons of nitrogen oxides, 248 tons of carbon monoxide, 85 tons of particulate matter, 40 tons of volatile organic compounds, and 25 tons of hazardous air pollutants.
3. EPA recognizes that even the best-performing biomass plants emit as much or more air pollution as coal plants.

Dirtier Than Coal

1. By most of these measures (with notable exceptions on sulfur and mercury), burning biomass is as polluting or worse than burning coal, and far worse than natural gas.
2. The latest EPA data shows that biomass emits 16% more NOx as bituminous coal, 50-60% more CO2,6 and similar levels of particulate matter – but biomass is worse for small particulate matter (PM10) and far worse for the finest and most dangerous particulate matter (PM2.5).
3. Dioxins (the most toxic chemicals known to science) are released at rates 7 times higher than coal, and 167 times higher if burning salt-laden wood, like marine pilings.
4. A comparison of air permit limits shows that biomass burners are being permitted to allow 50% more NOx, 500% more VOCs, 90% more PM and 25% more CO than coal power plants per unit of energy.

The "Carbon-Neutral" Myth

1. Biomass burning releases 50% more CO2 than coal, creating a carbon debt that is not overcome for decades.
2. It takes 45 years of trees grown to replace those burned in order to suck up enough CO2 so that the biomass is as bad as coal – and centuries before it can be called "neutral."
3. However, these trees are unlikely to be left undisturbed for so many decades, making "carbon-neutrality" a fantasy. Unfortunately, we do not have decades to waste.

"Clean Wood" Isn't Clean

1. Pine and larch are well-known accumulators of lead, and willow is considered a hyperaccumulator of cadmium.
2. Lead and cadmium are highly toxic and large portions (23% of lead and 60% of cadmium) can escape pollution controls and get into the air when burned.
3. Copper, iron and zinc are catalysts for dioxin formation and will boost the toxicity of the air emissions and ash. Researchers have found that toxic metal concentrations in normal wood ash are "disturbingly high" when tested and would be classified as hazardous waste in Europe, and have been turned away from normal landfills in Germany.
4. When the small (12-megawatt) Bio Energy plant in Hopkinton, New Hampshire was burning clean wood chips, from 1983 to 2002, it annually emitted about 600 pounds of lead and 8 pounds of mercury, "apparently naturally occurring in trees or absorbed through the soil," according to the state Department of Environmental Services.

Wood Waste

1. Woody material considered "waste" from logging is not waste, but provides habitat for small mammals when left on the forest floor and should be left for the forest to recover.

Biomass Violations, Accidents & Nuisances

1. A 2012 Wall Street Journal analysis found that 80% of U.S. biomass incinerators have been cited for air or water violations in the previous five years.
2. 27 Fires and explosions at biomass plants and wood piles are common, and nuisances from odor, dust and noise are serious problems for biomass plant neighbors.

Medical & Health Professionals Speak Out

1. Numerous medical professionals have come out opposed to biomass incineration, due to the health effects of biomass air pollutants, including the American Academy of Family Physicians, American Lung Association, Washington State Medical Association and the Massachusetts Medical Society.

Energy Justice Network

Woody Biomass Incineration

Biomass: Expensive and Unnecessary

Burning woody "biomass" may technically be renewable, if trees are replanted, but it is not clean or needed. Forests are impacted by logging to feed biomass incinerators, even now clearing U.S. forests to feed power plants in Europe.

Through conservation, efficiency, wind, solar and energy storage, we can meet all of our energy needs without needing nuclear power, or the burning of biomass, waste or fossil fuels.[1,2] Biomass is one of the most expensive ways to make electricity, second only to trash incineration.[3] Renewable energy mandates and subsidies undermine clean energy (wind and solar) whenever they support biomass.

"Renewable" Doesn't Mean Clean

Burning biomass emits particulate matter (PM), nitrogen oxides (NO_X), carbon monoxide (CO), carbon dioxide (CO_2), sulfur oxides (SO_X), toxic heavy metals (such as arsenic, mercury, lead, cadmium and chromium), acid gases, dioxins and furans, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), other hazardous air pollutants (HAPs), and even radioactive pollutants.

A typical 50 megawatt biomass incinerator permitted between 2008 and 2012 has expected annual emissions of 230 tons of nitrogen oxides, 248 tons of carbon monoxide, 85 tons of particulate matter, 40 tons of volatile organic compounds, and 25 tons of hazardous air pollutants.[4] Emissions of toxic metals and dioxins can be even higher if more contaminated types of biomass are burned, such as painted or treated construction / demolition wood waste. EPA recognizes that even the best-performing biomass plants emit as much or more air pollution as coal plants.[5]

Dirtier Than Coal

By most of these measures (with notable exceptions on sulfur and mercury), burning biomass is as polluting or worse than burning coal, and far worse than natural gas. For some pollutants, this is because biomass is actually more contaminated than coal. In other cases, burning one ton of biomass may release less of a pollutant than burning one ton of coal, but since five tons of wood must be burned to create the same energy as one ton of coal, biomass can be more polluting per amount of energy produced. Air regulations on biomass facilities are also weaker, so even where burning five tons of trees would produce less pollution than one ton of coal, the air pollution from the tree burner may be greater because it is not required to capture as much of its pollution as the coal power plant must.

The latest EPA data shows that biomass emits 16% more NOx as bituminous coal, 50-60% more CO_2,[6] and similar levels of particulate matter – but biomass is worse for small particulate matter (PM10) and far worse for the finest and most dangerous particulate matter (PM2.5).[7] Dioxins (the most toxic chemicals known to science) are released at rates 7 times higher than coal, and 167 times higher if burning salt-laden wood, like marine pilings.[8] A comparison of air permit limits shows that biomass burners are being permitted to allow 50% more NOx, 500% more VOCs, 90% more PM and 25% more CO than coal power plants per unit of energy.[9]

The "Carbon-Neutral" Myth

Biomass burning releases 50% more CO_2 than coal, creating a carbon debt that is not overcome for decades. It takes 45 years of trees grown to replace those burned in order to suck up enough CO_2 so that the biomass is *as bad as* coal – and centuries before it can be called "neutral."[10] However, these trees are unlikely to be left undisturbed for so many decades, making "carbon-neutrality" a fantasy. Unfortunately, we do not have decades to waste. Biomass burning cooks the climate faster than coal, and the atmosphere reacts the same whether the extra pulse of CO_2 came from a "biogenic" source or not. It is critical that we avoid global warming tipping points in the coming decades.

Bait and Switchgrass – Burning Toxic Wastes

"Green" biomass is often a foot in the door for more toxic waste streams. Biomass incinerators that start off burning "clean wood chips" often seek to burn more contaminated fuels like construction / demolition wood waste, tires, plastics or trash, since the facilities can get paid to take these wastes, rather than pay for their fuel. Economic pressures encourage use of dirtier fuels.

Keeping Coal Alive

Biomass co-firing at existing coal power plants is often proposed to keep coal plants alive that would otherwise close due to the expense of pollution control upgrades. This is encouraged by the Clean Power Plan, renewable energy policies, and loopholes that ignore CO_2 from biomass.

"Clean Wood" Isn't Clean

Even "clean" wood, straight from a forest, is contaminated with pollutants that trees absorb from the environment and can become significant sources of toxic pollution when burned. Some trees are especially good at taking up mercury, particularly willow and poplar (two species widely promoted for biomass use). When accounting for the lack of mercury control requirements on biomass plants, a wood burning biomass plant can release more mercury per unit of energy than a coal power plant with mercury controls.

Lead, cadmium, copper, iron and zinc are also taken up by trees.[11,12] Pine and larch are well-known accumulators of lead, and willow is considered a hyperaccumulator of cadmium.[13] Lead and cadmium are highly toxic and large portions (23% of lead and 60% of cadmium) can escape pollution controls and get into the air when burned.[14] Copper, iron and zinc are catalysts for dioxin formation and will boost the toxicity of the air emissions and ash.[15] Researchers have found that toxic metal concentrations in normal wood ash are "disturbingly high" when tested[16] and would be classified as hazardous waste in Europe,[17] and have been turned away from normal landfills in Germany.[18]

When the small (12-megawatt) Bio Energy plant in Hopkinton, New Hampshire was burning clean wood chips, from 1983 to 2002, it annually emitted about 600 pounds of lead and 8 pounds of mercury, "apparently naturally occurring in trees or absorbed through the soil," according to the state Department of Environmental Services.[19]

Wood Waste

So-called "wood waste" is often promoted as woody biomass. This could include cuttings from lumber mills or unused portions of trees from logging operations. Diverting lumber mill wood waste to biomass burners displaces that wood from its previous use (often already burned on-site for biomass or reused in pulp or paper-making), causing indirect pressure on forests as new logging is needed to fill the replace that wood's previous use. Woody material considered "waste" from logging is not waste, but provides habitat for small mammals when left on the forest floor and should be left for the forest to recover.[20]

Construction / Demolition / Disaster Debris

Another common type of "wood waste" is construction and demolition debris (known as "C&D"). With help from global warming-induced natural disasters, an increasing amount of disaster debris now also fits in this category. Utility poles, railroad ties, wood pallets and marine pilings carry similar dangers. On average, 13% of C&D waste is wood. Much of that wood is contaminated, both with non-wood materials that isn't well-separated, and with toxic treated or painted wood.

Wood waste can come contaminated with wood preservatives, binders, paints, glues, chlorine bleach, plastic laminating materials, chlorinated adhesives, or phenol and urea formaldehyde resins, nails/staples, or other non-wood materials. Treated woods are usually coated with creosote, pentachlorophenol, or chromated copper arsenate (CCA). Pentachlorophenol is a chlorinated compound that is contaminated with dioxin and creates more dioxin when burned. CCA, the most widely used wood treatment chemical, releases arsenic when burned and the chromium in the wood is converted to the toxic form (chromium VI) when burned. The copper in CCA (and in the new, arsenic-free, wood treatment chemicals) boosts dioxin when burned. It is difficult to sort out CCA-treated wood. Even where workers are specially trained to remove it, contamination rates of 9-10% have been found in the allegedly CCA-free wood piles. Contamination rates of 5% are enough for the ash to be considered hazardous waste, and rates of 1-2% still result in significant toxic metal emissions.[21] Although arsenic is no longer used in new wood treatment, this will be a problem for decades to come as it takes many years before treated wood hits the waste stream.[22]

Old painted wood can contain lead and mercury. While lead in paint was phased out in 1978 and mercury in 1991, this toxic painted wood can still end up in wood waste stream from demolition and remodeling of older homes. One biomass incinerator that threatened to reopen to burn C&D wood in Hopkinton, New Hampshire was permitted in 2003 to release an astounding 2.6 tons of lead per year and up to 31 pounds of mercury (nearly four times the mercury released when the plant burned "clean wood chips").[23,24]

Biomass Violations, Accidents & Nuisances

Biomass ash contains toxic metals and dioxins and should be handled as hazardous waste, not as fertilizer, though it sometimes is, resulting in contamination of farms.[25,26] A 2012 Wall Street Journal analysis found that 80% of U.S. biomass incinerators have been cited for air or water violations in the previous five years.[27] Fires and explosions at biomass plants and wood piles are common, and nuisances from odor, dust and noise are serious problems for biomass plant neighbors.

Medical & Health Professionals Speak Out

Numerous medical professionals have come out opposed to biomass incineration, due to the health effects of biomass air pollutants, including the American Academy of Family Physicians, American Lung Association, Washington State Medical Association and the Massachusetts Medical Society. Read their statements and others' online at: www.energyjustice.net/biomass/health/

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[1] Budischak, et. al., "Cost-minimized combinations of wind power, solar power and electrochemical storage, powering the grid up to 99.9% of the time" Journal of Power Sources 225, 60-74 (2013). www.sciencedirect.com/science/article/pii/S0378775312014759

[2] Mark Jacobson, "A Plan for a Sustainable Future: How to get all energy from wind, water and solar power by 2030," Scientific American, November 2009. www.stanford.edu/group/efmh/jacobson/Articles/I/susenergy2030.html

[3] "Updated Capital Cost Estimates for Electricity Generating Plants," Energy Information Administration, November 2010, p.7, Table 1. www.eia.gov/oiaf/beck_plantcosts/ (direct link: www.eia.gov/oiaf/beck_plantcosts/pdf/updatedplantcosts.pdf).

[4] "'Renewable' biomass power cuts forests, pollutes the air, drains rivers, and worsens global warming," Partnership for Policy Integrity biomass factsheet, April 2012. www.pfpi.net/wp-content/uploads/2012/04/PFPI-biomass-factsheet.pdf

[5] *Id.*, note 3.

[6] Emissions & Generation Resource Integrated Database (eGRID) 9th edition (2010 data), U.S. Environmental Protection Agency. www.epa.gov/cleanenergy/energy-resources/egrid/

[7] U.S. EPA WebFIRE Application. cfpub.epa.gov/webfire/

[8] "An Inventory of Sources and Environmental Releases of Dioxin-Like Compounds in the United States for the Years 1987, 1995, and 2000," U.S. EPA, November 2006, Table 1-14. cfpub.epa.gov/ncea/CFM/recordisplay.cfm?deid=159286

[9] "Trees, Trash and Toxins: How Biomass Energy Has Become the New Coal," Partnership for Policy Integrity, April 2014. www.pfpi.net/trees-trash-and-toxics-how-biomass-energy-has-become-the-new-coal

[10] Manomet Center for Conservation Sciences, "Biomass Sustainability and Carbon Policy Study," June 2010, p.26, Exhibit 2-7. www.manomet.org/program/sustainable-economies/study-woody-biomass-energy; see also our review of the biomass climate science showing that biomass is not carbon neutral: www.energyjustice.net/biomass/climate

[11] Danny R. Jackson, William J. Selvidge and Beverly S. Ausmus, "Behavior of heavy metals in forest microcosms," Water, Air & Soil Pollution 10 (1978) 3-11. www.springerlink.com/content/u46p0735345t6053/

[12] Clemens Reimanna, Rolf Tore Ottesen, Malin Andersson, Arnold Arnoldussen, Friedrich Koller, Peter Englmaier, "Element levels in birch and spruce wood ashes: green energy?" Science of the Total Environment 393 (2008) 191-197. www.sciencedirect.com/science/article/pii/S0048969708000429

[13] *Id.*

[14] Michal Šyc, Michael Pohorelý, Petra Kameníková, Jan Habart, Karel Svoboda, Miroslav Puncochár, "Willow trees from heavy metals phytoextraction as energy crops," Biomass and Bioenergy, 2012;37:106–113. www.sciencedirect.com/science/article/pii/S0961953411006441

[15] Mike Ewall, "Metals as Catalysts for Dioxin Formation," (compilation of over a dozen published research papers documenting the phenomenon), December 2003. www.ejnet.org/dioxin/catalysts.html Copper is the most potent catalyst.

[16] Note 12 *supra.*

[17] Ribbing C., "Environmentally friendly use of non-coal ashes in Sweden," Waste Management 27 (2007) 1428–35. www.sciencedirect.com/science/article/pii/S0956053X07001092

[18] K. Pohlandt-Schwandt, "Treatment of Wood Ash Containing soluble chromate," Biomass and Bioenergy 16 (1999) 447-462. www.sciencedirect.com/science/article/pii/S0961953499000136

[19] Stephanie Ebbert, "N.H. plant's plan to burn debris fuels town fears," Boston Globe, September 20, 2004. www.boston.com/news/local/articles/2004/09/20/nh_plants_plan_to_burn_debris_fuels_town_fears/

[20] "Forestry's Waste Wood Offers Habitat for Small Forest-Floor Animals," ScienceDaily (Oct. 24, 2012). www.sciencedaily.com/releases/2012/10/121024124625.htm

[21] Monika Blassino, Helena Solo-Gabriele & Timothy Townsend, "Pilot scale evaluation of sorting technologies for CCA treated wood waste," Waste Manage Res 2002: 20: 290–301, 297. wmr.sagepub.com/content/20/3/290.abstract

[22] Timothy Townsend & Helena Solo-Gabriele, "New Lines of CCA-Treated Wood Research: In-Service and Disposal Issues," March 19, 2001, pp.36, 54 & 115. www.ccaresearch.org/solo-gabrielle_00-12.PDF

[23] Modification of Title V Operating Permit issued to Bio Energy LLC by New Hampshire Department of Environmental Services, July 25, 2003. www2.des.state.nh.us/OneStopPub/Air/3301300101FY03-0132TypePermit.pdf

[24] Note 19 *supra.*

[25] Tom Gascoyne, "Fly in the ashes: Waste from co-generation plant tests high for dioxins," Chico News & Review, July 5, 2012. www.newsreview.com/chico/fly-in-the-ashes/content?oid=6579788

[26] Note 12 *supra.*

[27] Justin Scheck & Ianthe Jeanne Dugan, "Wood-Fired Plants Generate Violations," Wall Street Journal, July 23, 2012. online.wsj.com/article/SB10001424052702303740704577524822063133842.html

Mike Ewall 215-436-9511 mike@energyjustice.net www.energyjustice.net/biomass/ Aug 2014

Collins Pine Company Sued by Community Health Watch &
Global Watchdog Group For Clean Water Act Violations and Toxic
Releases to Local Water Supply - Hundreds of Self-Reported Violations - Polluted Discharges
into Drinking Water

(Chester, CA) A Clean Water Act and Safe Drinking Water and Toxics Enforcement Act ("Proposition 65") lawsuit was filed today in the federal Eastern District Court of California against Collins Pine Company for its **sawmill and biomass incinerator operations,** which have **caused pollution for years** in this small community of approximately 2,000 residents. The suit was filed by Aqua Terra Aeris (ATA) Law Group on behalf of local group, Community Health Watch, and international toxics watchdog, Global Community Monitor. Community Health Watch and Global Community Monitor seek an injunction to halt the routine and **systematic pollution caused by Collins Pine Company's discharge, emission and dumping of toxic pollutants, in addition to civil penalties.** State and federal law prohibit discharges of carcinogens and reproductive toxics and pollutants as a means to avoid harm to persons and the environment. Hundreds of hours of research on official reports revealed significant, continuing pollution caused by the Collins Pine Company to drinking water sources, forested land, and air basin in Chester, CA and the surrounding areas. "These discharges and releases of toxics and water pollutants were more than the occasional lapse – the allegations and self-reported violations suggest an unlawful pattern and practice. Despite violations noted by regulators over a number of years, we continue to discover additional violations," said Matthew Maclear of ATA Law Group.

With hundreds of self-reported violations and other discharges and emissions of Proposition 65 listed chemicals, the public health of the local community has been adversely affected according to information collected by local leaders of Community Health Watch."Quote from GCM" "The violations noted to date include emissions, disposals and discharges containing known carcinogens, reproductive toxicants and other pollutants. Ineffective government oversight has failed to stop the ongoing pollution. Community Health Watch and Global Community Monitor are requesting that Collins Pine Company be required to manage its operations properly in conformance with state and federal laws."Community Health Watch is an unincorporated citizen group located in Chester, California. The mission and focus of Community Health Watch is to protect the combined social, health, environmental and cultural conditions that influence individuals and the community in the Chester and Lake Almanor area of Plumas

County, California (About GCM) ATA Law Group represents nonprofits, community groups, property owners, environmental justice communities and individuals impacted by pollution.

Biomass Highlights:

+ Biomass (a forest waste product) worse than coal or gas as a source for our electrical power

+ We live in pollution mists of oil/gas/wood burn fumes, but few understanding how biomass wood burn is worst of all for global warming.

+ Biomass is deceptively claimed to be 'renewable', not as people have come to understand the term *'renewable'* (originally being solar, wind or wave technology.

+ Biomass is being claimed as the new 'Green Energy", but this product hardly green, being proven far more carbon intensive and polluting than coal. Its facilities release as much as 50 percent more carbon pollutants and as much as 100 percent more than other air pollutants

+ As the Environmental Protection Agency strives to limit greenhouse gas (GHG) emissions, it is critical for the carbon accounting rules to be correct, not crediting activities for reducing emissions when they actually increase and create powerful perverse incentives.

+ The International Energy Agency estimates that treating bioenergy as carbon free globally would lead to reliance on woody biomass for 6% of electricity by 2035, increase global warming and more than double global commercial timber harvest.

+ Exemptions for broad categories of biomass fuels would not only encourage large-scale harvesting of wood to replace coal and other fossil fuels but also place no limits on the diversion of the world's agricultural land to energy use, requiring conversions of forests and grasslands to meet food needs.

+ Even the cleanest of plants emit pollutants such as nitrogen oxides and particulates at levels higher than coal.

+ Plants in California have had massive fines from endangering people's health when caught emitting beyond the 250-ton threshold.

+ Biomass perpetuates the elimination of trees (our greatest healing energy
for offsetting global warming by absorbing/storing of carbons)…
then industry burns their waste (biomass) as fuel, an insane measure,
because in one move we lose our best healing power,
then use it to further pollute for electric energy,
thus doubling up of carbon abuse.

+ HSU forestry a recognized leader in biomass research, claiming this product has potential to lower greenhouse gas emissions. How could this be? What to make of this accounting?

+ In May 2011 Humboldt State University, Green Diamond Resource Company, Korbel, CA, and 10 other partners teamed under a $5.3 million federal research to evaluate forest biomass-timber slash and other harvesting waste-as an energy- one of the largest grants ever received by HSU.

+ In Southern states whole trees are cut for use as biomass, being sent to Europe for producing electrical energy, but now all this under investigation.

Biomass Pollution Basics - World Health Organization

http://*www.who.int/indoorair/.../antiguamod21.pdf*

David Pennise Center for Entrepreneurship in International Health and Development Center for Entrepreneurship in International Health and Development (CEIHD) (CEIHD) University of California Berkeley based on material prepared by: Professor Kirk R. Smith Environmental Health Sciences University of California - - Berkeley Outline

Biomass Pollution Basics **presented ...** ***Pollutants*** **in Solid Fuel Smoke ...** ***Biomass*** **burning emits many products....**

Biomass Under Investigation Now In Europe Through an accounting trick (distortion of the truth) in Europe's clean energy regulations, all wood energy is treated as if it releases no carbon dioxide, allowing European national governments and their energy sectors to pump tens of millions of tons of greenhouse gases into the air every year! This treats electricity generated by burning wood as a "carbon neutral" o - "zero emissions", the same as solar panels or wind turbines',

The European Union (EU) Commission is investigating state aid provided for the world's largest forest destroyer for electricity, Drax, company moving us backwards away from a healthy, truly sustainable future. Enormous amounts of taxpayer dollars being directed towards the biomass industry. , Drax makes over $930 million yearly in this grossly distorted subsidy further costing taxpayers.

Since industrial biomass exploded onto the scene in the Southern US, the industry has attempted to paint itself as one that fits into the framework and culture of the traditional logging industry, a symbiotic relationship with an already existing industry. They want us to believe our precious resources are all being managed efficiently, with no negative impacts. A huge manipulation of what 'renewable' energy means.

At the Enviva facility in Southampton, VA: one finds massive piles of whole hardwood trees to be burned for electricity in Europe – funded by UK subsidies.

In Europe, we now know biomass also includes burning of whole trees. To what extent this goes on elsewhere is not yet known.

From Open Burning Biomass July 30, 2012 Abstract.pdf
Plumas County, CA effect of Moisture-Charge Size+Chlorine Concentration on PCDD-F Emission from Burning of Forest Biomass May 1, 2011.pdf
71 6 2015 Plumas County, California Media Release Collins Pine Sued for Pollution From Biomass Incinerator Operations January 9, 2015.pdf
4 7 2014 EPA Loopholes Allowe Biomass to Emit More Toxic Air Pollutants Than Coal Study Says April 9, 2014 News.pdf
Plumas County, CA U.S. DOE ARM Climate Research Facility-California Campaign Aircraft-Biomass Burning 2013-2015 19873.pdf

2015* Biomass Lawsuit - Plumas County *NEWS:

Plumas County, California - Media Release - January 9, 2015

Contacts: Community Health Watch (Margie Strite); Global Community Monitor (Denny Larson at 415-845-4705); ATA Law Group (Matthew Maclear at 415-568-5200)

Collins Pine Company Sued by Community Health Watch & Global Watchdog Group For Clean Water Act Violations and Toxic Releases to Local Water Supply - Hundreds of Self-Reported Violations - Polluted Discharges into Drinking Water

(Chester, CA) A Clean Water Act and Safe Drinking Water and Toxics Enforcement Act ("Proposition 65") lawsuit was filed today in the federal Eastern District Court of California against Collins Pine Company for its sawmill and biomass incinerator operations, which have caused pollution for years in this small community of approximately 2,000 residents. The suit was filed by Aqua Terra Aeris (ATA) Law Group on behalf of local group, Community Health Watch, and international toxics watchdog, Global Community Monitor. Community Health Watch and Global Community Monitor seek an injunction to halt the routine and systematic pollution caused by Collins Pine Company's discharge, emission and dumping of toxic pollutants, in addition to civil penalties.

State and federal law prohibit discharges of carcinogens and reproductive toxics and pollutants as a means to avoid harm to persons and the environment. Hundreds of hours of research on official reports revealed significant, continuing pollution caused by the Collins Pine Company to drinking water sources, forested land, and air basin in Chester, CA and the surrounding areas.

"These discharges and releases of toxics and water pollutants were more than the occasional lapse – the allegations and self-reported violations suggest an unlawful pattern and practice. Despite violations noted by regulators over a number of years, we continue to discover additional violations," said Matthew Maclear of ATA Law Group.

With hundreds of self-reported violations and other discharges and emissions of Proposition 65 listed chemicals, the public health of the local community has been adversely affected according to information collected by local leaders of Community Health Watch.

Quote from GCM "The violations noted to date include emissions, disposals and discharges containing known carcinogens, reproductive toxicants and other pollutants. Ineffective government oversight has failed to stop the ongoing pollution. Community Health Watch and

Global Community Monitor are requesting that Collins Pine Company be required to manage its operations properly in conformance with state and federal laws."

Community Health Watch is an unincorporated citizen group located in Chester, California. The mission and focus of Community Health Watch is to protect the combined social, health, environmental and cultural conditions that influence individuals and the community in the Chester and Lake Almanor area of Plumas County, California

(About GCM) ATA Law Group represents nonprofits, community groups, property owners, environmental justice communities and individuals impacted by pollution.

February 9, 2015

Gina McCarthy
Administrator, US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator McCarthy,

As the Environmental Protection Agency strives to limit greenhouse gas (GHG) emissions, it is critical for the carbon accounting rules to be correct. Rules that improperly credit activities for reducing emissions when they actually increase them create powerful perverse incentives.

We write to raise strong concerns about the November 19th, 2014 memo from Acting Assistant Administrator for the Office of Air and Radiation Janet McCabe (McCabe memo), which would credit use of woody biomass for energy with reducing emissions, when it actually increases them. Because EPA can expect its accounting rule to be applied globally, it is likely to lead to the additional harvest or conversion to agriculture of large areas of the world's forests.

Burning biomass instead of fossil fuels does not reduce the carbon emitted by power plants. In fact, as EPA itself acknowledges, burning biomass degrades facility efficiency and increases day-to-day emissions over emissions when fossil fuels are burned alone.

Growth of additional biomass beyond business-as-usual or recovered from waste can help to offset those emissions, but peer-reviewed science indicates this process takes several years to several decades. This conclusion was the basis of a report issued by EPA's Science Advisory Board (SAB) in 2012, which criticized EPA's 2010 Draft Framework for Biogenic CO2 Accounting (the Framework) because it would have claimed carbon savings for harvests of wood that diminished the growth of forest stocks in the US and much of the world.

By itself, diverting biomass from existing uses in food, paper and timber cannot reduce GHG emissions (except at the cost of food, paper and timber). At the same time, burning biomass, such as trees, that would otherwise continue to absorb and store carbon comes at the expense of reduced carbon storage.

The McCabe memo proposes to treat as "carbon-free" all woody or agricultural feedstocks so long as they are derived "from sustainable forest or agricultural practices." At maximum, "sustainability" implies that forest harvesting does not exceed growth, which is a necessary, but not sufficient condition for carbon neutrality, as found by the SAB. At minimum, sustainability practices can help reduce soil erosion and other environmental impacts of forestry or agricultural production. But such practices have little-to-no bearing on the carbon implications of biomass use.

Including such exemptions for broad categories of biomass fuels in a final rule would not only encourage large-scale harvesting of wood to replace coal and other fossil fuels but also place no limits on the diversion of the world's agricultural land to energy use, requiring conversions of forests and grasslands to meet food needs.

The potential implications of these exemptions are large because even small quantities of

bioenergy require large quantities of wood. For example, the US Energy Information Agency estimates that treating woody biomass as carbon free with modest carbon restrictions would result in an additional 4% of present US electricity from wood by 2035. That would require an increase of wood equivalent to 70% of the US timber harvest, which for perspective would be far greater than if we were to abolish all paper and cardboard recycling in the US.

The International Energy Agency estimates that treating bioenergy as carbon free globally, coupled with strong carbon policies, would lead to reliance on woody biomass for 6% of electricity by 2035, and that would require more than a doubling of global commercial timber harvest.

According to common estimates, the world likely needs 70-100% more food in the next forty years—and possibly a comparable increase in commercial wood products. These demands are placing great stress on the world's forests, woody savannas and wetlands and their carbon storage. The proposed EPA policies would greatly add to this stress to produce small quantities of energy.

In addition, the exemptions in the McCabe memo are likely to lead to increased US emissions of CO2. The exemptions would, in effect, allow power plants and factories to ignore the loss of carbon from forests when they harvest trees for energy, but the US must count this carbon when it reports national emissions under the UN Framework Convention on Climate Change.

Numerous studies have shown that when whole trees are harvested to replace coal, the result is an increased transfer of carbon to the air for decades due to the lower carbon efficiency of using wood than fossil fuels.

Ignoring this carbon in US law cannot change what the atmosphere sees, and does not change our obligations to report those emissions accurately to the world.

The creation of such an accounting loophole in the EU has resulted in European power plants setting up large wood pellet facilities in the US—primarily in the Southeast— and rapidly increasing pellet exports to Europe. Although they are incorrectly claiming GHG reductions for burning these wood pellets, their actions are increasing our reported emissions. The US should be objecting to these activities, not creating a similar accounting loophole in US law. Doing so would seriously undermine President Obama's admirable pledge to reduce US emissions 20% by 2020 and 30% by 2030.

The approach proposed in the McCabe memo would harm efforts, to which the US is an active party, to protect forests around the world, particularly tropical forests. The exemption for "sustainably-derived" wood would not exclude tropical forests from feeding the US energy market or replacing US wood diverted from pulp and paper into energy production. Neither can the US expect other countries to abstain from claiming similar GHG reductions by cutting down their forests for energy. In effect, the proposed exemption would operate to reverse the Reduced Emissions from Deforestation and Forest Degradation (REDD) program. It would reward forest managers for the carbon in their trees but only if they cut those trees down.

This approach would also undercut incentives to use biomass that is truly low in carbon. For

example, power producers would have little incentive to focus on wastes and residues—which can result in lower net emissions compared to burning fossil fuels, but can be expensive to collect and transport—if EPA credits those feedstocks with no more benefits than harvesting whole trees.

We urge you to reconsider the approach to biomass as proposed in the McCabe memo and instead employ a scientifically valid system for counting the global warming effects of biomass.

Sincerely,

Dr. Viney P. Aneja, Professor of Air Quality, Professor of Environmental Technology, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC

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