Public Comment

Submitted
at the December 10, 2019
Community Advisory Committee
Special Meeting

CAPE Comment

December 10, 2019

Matty Tittman, RCEA CAC Chair and Members of RCEA CAC

RE: RePower Humboldt (CAPE 2019 Update)

As a RCEA CCE ratepayer, I oppose biomass as an energy source because it is not clean and it is not renewable.

Examples of clean energy sources are solar, wind, geothermal, small hydro. These sources do not emit carbon dioxide, carbon monoxide, N0x, or particulates, and do not have waste products that are toxic and/or radioactive; the raw input comes from natural physical processes that are consistently available and do not have to be mined, or result from large scale ecosystem disruption e.g., industrial logging.

Examples of renewable energy sources are solar, wind, geothermal, small hydro. These sources come from natural physical processes that occur daily or intermittently within a short time scale compatible with electricity demands and energy storage.

Burning mill and timber waste 24/7 emits more carbon into the atmosphere than can be sequestered by the remaining forest within the time we have left to reduce atmospheric carbon and stay within 1.5 degrees Celsius global temperature increase. At the current global carbon emission rate, we have 8 years of the carbon budget left, the point at which we will surpass 1.5 degrees of global warming. Burning woody biomass 24/7 is not renewable or carbon neutral within a decade because: 1) trees sequester carbon only in daylight; they respire and emit C02 at night and when wind or water/temperature stressed; 2) newly planted trees don't grow fast enough to even approach the photosynthetic capacity of older trees; 3) clear cuts disturb the soil and change it from a carbon sink into a carbon emitter; 4) internal combustion engines used in logging and biomass plants emit carbon. The physical process of global warming operates without regard for the carbon source.

Humboldt Redwood and Humboldt Sawmill corporations put short term profit over people and planet. They could choose to work with RCEA to transition to a solar micro-grid system with batteries and backup generators; they have the space and assets. This would be a better investment and asset than a biomass plant. They want, and RCEA is forcing, ratepayers to pay to upgrade the biomass plant to coal plant standards and pay to thin their plantation forests. This is disgusting!

Thank you for considering my comments.

Diane Ryerson
[redacted]
Arcata, CA 95521

Dec 10, 2019

The biomass paragraph dealing with transitioning away from biomass was most encouraging. It should have a time frame target and a responsible subcommittee. My intuition tells me that soil amendments will be a premium items as land it lost to rising seas and weather pattern change the location of agriculture land.

However, if appears that we are kicking the can down the road in terms utilizing both plants full capacity. The staff report to the board September 2017 Para 7.1 stated that there was approximate 20 to 25 MW from mill waste. The new wording appears to say that fuels from forest thinning will be added to the mix. Have the goal posts been moved? Single aged forest land require one or two thinning to encourage more rapid growth of merchantable trees. Reducing surface fuel is an ancillary benefit. Pile burning is the least costly way clear land for replanting. Now it appears that the rate payer will cover the cost of industrial waste removal and pay for the bad forest management practices of the past. Paying higher prices for biomass with yearly cost of living adjustment versus the wind and solar contracts where there are constant rates over the life of the contract is problematic.

Thinning should be built into the cost of lumber and not your electric bill. Saving can be applied to other beneficial uses

Matthew Marshall stated at a CAPE meeting words to the effect that RCEA does not pay for anything it was the rate payer who pays.

When equipment is upgraded the rate payer paid for that equipment and then the the plant owner use the cost of that equipment as an investment tax credit or as depreciation cost to lower payable taxes.

Walt Paniak

Dec 10

I would like to provide some additional data for review .
The source of this data is the Energy Information Agency form 923Generation and Fuel consumption report The top report is the 2018 Final showing the fuel used and net energy output for the year. Fairhaven cogenerates with NG. (Discuss 2018 Natural Gas for U Months 45,318 mcf and Humboldt Sawmill use 51,996 gal. of diesel oil. The middle report shows interim totals for Jan thru Sept 2019 for HSC only (30,996 gals used).
The backside of the report taken from a OSU Dept of Forestry paper showing Dept of Energy measuring pounds of CO2 per MWh comparing biomass to fossil fuel.
Biomass energy averaged 3450 lbs of CO2 per MWh versus 1915 lbs for petroleum and 1314 lbs for Natural Gas.
The use of these supplemental fuels should be noted in the board's definition of clean energy or not so clean.

The RCEA 2018 Integrated Resource plan figure 10 lists :NOX 319 tons per year and 61 tons per year PM 2.5.
Nitrous oxide is 264 times more powerful as a GHG than CO2 per IPPC.
I would request that the committee directs the staff to provide updated information for these pollutants because the biomass output has increased.

Walt Paniak
Arcata

Sat, Dec 7, 10:15 AM

Walter Paniak <[redacted]>
To: Walter Paniak <[redacted]>

Department of Energy, The Energy Information Administration (EIA)
923 Monthly Generation and Fuel Consumption Time Series File, 2018 Final Revision
rces: EIA-923 and EIA-860 Reports

tid	Plant Name	Reported Fuel Type Code	Physical Unit Label	Year-To-Date Total Fuel Consumption Quantity	Net Generation (Megawatthours)	YEAR
10052	Fairhaven Power	NG	mcf	45,318	2,054	2018
10052	Fairhaven Power	WDS	short tons	100,690	37,565	2018
50049	Humboldt Sawmill Company	DFO	barrels	1,238	271	2018
50049	Humboldt Sawmill Company	WDS	short tons	209,140	109,666	2018

Text

Fairhaven final NG total 2018 45318 mcf
HSC used 51,996 gals of diesel for cogeneration

U.S. Department of Energy, The Energy Information Administration (EIA)
EIA-923 Monthly Boiler Fuel Consumption and Emissions Time Series File, 2019 September
Sources: EIA-923 and EIA-860 Reports

Plant Id	Plant Name	Physical Unit Label	Year-To-Date Total Fuel Consumption Quantity	YEAR
50049	Humboldt Sawmill Company	barrels	497	2019
50049	Humboldt Sawmill Company	short tons	72,696	2019
50049	Humboldt Sawmill Company	barrels	241	2019
50049	Humboldt Sawmill Company	short tons	76,259	2019
50049	Humboldt Sawmill Company	barrels	0	2019
50049	Humboldt Sawmill Company	short tons	0	2019

Fairhaven is not required to
report 2019 until Fed 2020
HSC con-generates with
Diesel using 2 boilers: total
diesel used in gals
497+241=738x42 gal=30,996

Figure 10: Estimates of annual emissions of nitrogen oxides and particulate matte

	2018	2022	2026	2030
	177,828	48,018	0	0
Biomass MWh	319	120	0	0
Nox (tons)	61	24	0	0
PM2.5 (tons)				

2018 IRP

between forest biomass and fossil fuels, forest biomass has a higher CO_2 production per energy unit produced. This analysis applies only to boiler output, and does not include alternatives or other emissions for each energy source.

Data from OSU

Chair endowed by forest industry

Table 4. CO2 output ratios of fossil fuels compared to wood biomass. (fossil fuel estimates from U.S. Dept. of Energy 2000). For example, natural gas releases 38% of CO2 per MW-hour of electricity or 54% of CO2 per MM BTU as compared to the wood biomass.

Stand-alone Electric Plant			
Assumptions:	45% MC (Wet Basis)		
	25 MW plant		
	Uptime: 20 hrs/day		
	33% from boiler converted to electricity		
Calculations	0.94	bone dry tons per MW-hr	
Biomass	0.47	tons Carbon per MW-hr	
	940	lbs Carbon per MW-hr	
	3450	lbs CO2 per MW-hr	
Compare to Biomass			**Percentage of Biomass**
Coal	2117	lbs CO2 per MW-hr	61%
Petroleum	1915	lbs CO2 per MW-hr	56%
Natural Gas	1314	lbs CO2 per MW-hr	38%

Combined Heat and Power			
Assumptions	80% from boiler recovered for heat		
Calculations	4800000	BTU recoverable for heating per green ton	
	0.94	bone dry tons per 4800000 BTU	
	3450	lbs CO2 per 4800000 BTU	
	719	lbs CO2 per MM Btu	
Compare to Biomass			**Percentage of Biomass**
Coal	629	lbs CO2 per MM Btu	86%
Petroleum	561	lbs CO2 per MM Btu	78%
Natural Gas	385	lbs CO2 per MM Btu	54%