CLERK OF THE BOARD

COMMENTS ON STAFF REPORT:

INITIAL STATEMENT OF REASONS

FOR PROPOSED RULEMAKING

OFFERED BY AMERICAN WASTE TO ENERGY

George Sterzinger

American Waste to Energy

[gsterzinger@gmail.com](mailto:gsterzinger@gmail.com)

202-255-8119

1. American Waste to Energy (AWE) appreciates the opportunity to offer these comments to the Air Resources Board as part of its consideration of the Staff Report: Initial Statement of Reasons for the Proposed Rulemaking.
2. AWE currently directs substantial effort towards developing and commercializing innovative technologies to reduce the carbon intensity of the fossil fuels produced, refined and distributed in California. AWE supports the ARB use of permits (and the financial support the permits would provide) to attract existing and innovative programs to lower the carbon intensity particularly of the fossil fuel sector of California.
3. AWE supports both the Low Carbon Fuel Standard and the Cap-and-Trade Program. AWE supports the simultaneous application of these two programs. Basically, any program that complies with the Cap-and Trade Program can also contribute to compliance with the LCFS provided the specific action leads to a reduction in the carbon intensity of the fuel supply.
4. AWE’s comments focuses on two closely related points.
   1. First, the Cap-and Trade program and the LCFS are two programs that are meant to be consistent. A program that meets the requirements of the Cap-and-Trade bill to lower carbon intensity can also lower the carbon intensity of the sectors related to fossil fuels. If those conditions are met then the programs will be awarded permits under both the Cap-and-Trade and the LCFS program. This is intentional. The Air Resources offers this as an incentive to encourage actions to lower carbon intensity under both the Cap-and-Trade and the LCFS.
   2. Second, those same principles should be extended to the Innovative Technologies for Crude Oil Production program outlined in the Proposed Rulemaking. Ant Innovative Technology that can achieve a sustained commercial breakthrough should be eligible for inclusion under the Cap-and-Trade and the LCFS programs. Any decision to limit access to or eligibility under the LCFS program is counter-productive. It reduces the incentives to support the innovation and will ultimately harm the LCFS program.
5. AWE supports the basic simultaneous access to the Cap and Trade (C&T) program and the Low Carbon Fuel Standard (LCFS). The Staff responses to issues raised by the Department of Finance underlines the important this consistency. The Staff states: “The LCFS and the Cap-and-Trade program are designed to complement one another. Investments made to comply with one of the programs will result in reduced compliance requirements for the other program. Reductions in the carbon intensity of fuel due to the LCFS reduce compliance obligations under the Cap-and-Trade Program. Similarly, selling cleaner fuels to comply with Cap-abd-Trade helps meet the requirements of the LCFS.” (Title 17. California Air Resources Board: Notice of Public Hearing to Consider a Low Carbon Fuel Standard, pg. 24)
6. AWE’s strongly supports this. The Staff properly finds that any program that meets the requirements of both the Cap-and Trade and the LCFS should be recognized and benefit from both programs. Such programs should receive tradable permits under BOTH the Cap-and-Trade and the LCFS programs. This consistency is emphasized by the Staff as an important way to provide potentially important financial support for efforts undertaken to lower the carbon intensity of the fossil fuel sectors of the California economy.
7. AWE’s point here is to extend this basic consistency between the Cap-and Trade and the LCFS. It should logically be extended to include Innovative Technologies that have not yet achieved full commercial breakthrough.
8. AWE is particularly urges the ARB to recognize the potential of technological innovation with biomass-based fuels to lower the carbon intensity under the Cap-and-Trade and the LCFS. AWE stresses that this recognition is nothing more than the recognition of a potential. If the potential cannot be realized, i.e. the technology cannot be brought to commercial status, then nothing happens. From the viewpoint of the ARB this recognition of the potential does not have a downside. On the other hand, the premature decision to reject any biomass based technology innovation removes a potential benefit for no reason.
9. AWE is aware that the ARB Staff has considered and rejected the use of ‘biomass steam, heat, and electricity production as innovative methods’. AWE urges ARB to reconsider this across-the-board rejection for general and specific reasons. As a general proposition, ARB’s broad rejection of the use of biomass will exclude potential technology innovations that have not yet been developed. Going back to AWE’s initial point: such a rejection only serves to unnecessarily eliminate potential breakthroughs. Broad rejection unnecessarily removes a potential. Allowing the possibility of a breakthrough is a cost-free benefit that deserves the possibility to prove itself. The Staff also raises several specific concerns about biomass based LCFS fuels. Specifically that:
   1. Combustion of waste biomass will produce excess ‘criteria pollutants’. The innovations being considered do not rely on combustion but instead use a variety of gasification and even enzymatic processes. Moreover, if any method violated air standards on criteria pollutants the technology will not be permitted.
   2. Waste biomass is not generated as part of the ‘life cycle of crude oil production’ and will result in the ‘shuffling’ of biomass among other competing uses. The simplest point here is that the same would hold true for solar steam generated in Concentrating Solar technologies. The second point is that under current California Energy Commission rules, waste biomass cannot be used to produce renewable qualified electricity.
   3. The standard applies to biomass produced anywhere ‘in the world’ which would raise difficult to impossible monitoring requirements. This concern is easily addressed. To qualify under Cap-and-Trad and the LCFS biomass must be evaluated using the ASTM D 6866 test. That test determines the organic carbon faction of the biomass fuel. That test must be applied to any biomass regardless of point of origin. The tests must be done as random samples. Tests must be done on a regular basis and resukts must be reported to the ARB.
   4. Finally, greenhouse gases from biomass will exceed emission reductions expected from ‘solar or wind power’ and for that reason should be rejected. First, this conclusion is not supported with evidence. But more importantly, the LCFS standard is not offered as the ‘best’ options. (All our children cannot be above average.) The challenge for the LCFS and for the Cap-and-Trade program is to reduce CO2 emissions and intensity as much as possible. Any and all measures that produce a marginal, positive reduction will help reach that goal and should be accepted under the Cap-and-Trade and the LCFS.
10. Under the Cap-and-Trade program the ARB has issued Final Orders specifically defining materials that qualify as biomass and specified the American Society of Tests and Measures (ASTM) to determine the percent of the organic carbon-based materials to qualify as biogenic CO2 emissions. Biogenic CO2 emissions must be reported but do not require permits to cover the emissions. Thee standards should be required for any Innovative Technology option seeking commercial status. Here are the specific standards required by the ARB:

ARB Definition of Biomass (From the Final Order)

(31) “Biomass” means non-fossilized and biodegradable organic material

originating from plants, animals, and microorganisms, including

products, by-products, residues, and waste from agriculture, forestry,

and related industries as well as the non-fossilized and biodegradable

organic fractions of industrial and municipal wastes, including gases

and liquids recovered from the decomposition of non-fossilized and

biodegradable organic material. For the purpose of this article,

biomass includes both California Renewable Portfolio Standard (RPS)

eligible and non-eligible biomass as defined by the California Energy

Commission.

Article 5: CALIFORNIA CAP ON GREENHOUSE GAS EMISSIONS AND

MARKET-BASED COMPLIANCE MECHANISMS, pg A-8.

§ 95852.2. Emissions without a Compliance Obligation.

Emissions from the following source categories and fuel types as identified in sections 95100 through 95199 of the Mandatory Reporting Regulation count toward applicable reporting thresholds but do not count toward a covered entity’s compliance obligation set forth in this regulation article unless those emissions are reported as Other Biomass CO2 under MRR. These source categories Emissions without a compliance obligation include:

Combustion emissions from the folowing biomass-derived portion of biomass-derived fuels (except biogas

from digesters) from the following

sources:

(1) Solid waste materials, including the biogenic content of solid waste materials that are not 100 percent biomass, as determined by methodology specified in ASTM D6866, based on exhaust sampling or fuel sampling (and fuel usage record keeping) at the specified frequency and tires which may use alternative tests.