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RENEWABLE ENERGY, LP

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Comments and Concerns Regarding the AB1007 State Alternative Fuels Plan

Docket Number 06-AFP-1

Addressed to the following:

- Members of the California Energy Commission, Transportation Committee
  - Including but not limited to James Boyd, Jeffrey Byron, B.B. Blevins, Tim Olson, and Rosella Shapiro
- Members of the California Air Resources Board
  - Including but not limited to Babara Fry, Michael Scheible, and Tom Cackette

From:

- Harry Simpson, President, Crimson Renewable Energy LP

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As someone who has been an active participant in the industry and stakeholder working/advisory group that was formed by the California Energy Commission ("CEC") to contribute to the development of the AB1007 State Alternative Fuels Plan ("The Plan"), I have several comments and concerns on the latest draft of The Plan that has been posted at http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CTD.PDF.

Additionally, I would like to express my extreme disappointment that it seems like none of The Plan's listed actions for Biodiesel and Renewable Diesel came from the Scenario Analyses papers that were developed over the last several months by technical lead staff assigned by the CEC to the development of The Plan, to which I and several other energy and renewable fuels industry and other stakeholders contributed. Which in turns begs the question as to why the CEC bothered to gather industry and stakeholder input for developing the Scenario Analyses if this wasn't even going to be utilized for The Plan.

My comments and concerns relate largely to the Biodiesel / Renewable Diesel sections of Chapter 2 (pages 14-16), although I also have some comments on the Executive Summary (pages ES1 –ES9). For those you who are not familiar with Crimson Renewable Energy, I will provide a brief introduction to our company, which may also provide some context regarding the comments I have provided in this document.

Company Background

Crimson Renewable Energy LP ("Crimson") was created in June 2006 as a new business unit of Crimson Resource Management Corp. to develop & operate renewable energy production assets. Crimson Resource Management is a leading independent oil & gas producer in California -- over 400 oil and gas wells in California and other related business units such as a crude oil pipeline network that delivers over 70,000 barrels of crude oil per day to refineries in Southern California and gas processing plants that provide 15 million cubic feet of gas per day. Crimson is focused on (i) biodiesel production and marketing, and (ii) the conversion of organic waste biomass into bio-gas and other types of energy.

Crimson is currently constructing the largest biodiesel production plant in California, a 30 million gallons per year facility near Bakersfield, CA. Crimson currently markets bulk biodiesel to fuel distributors in California from its terminal facility near Bakersfield, CA. Crimson is also in the midst of developing a second biodiesel production facility in Stockton, CA that will have an annual capacity of up to 45 million gallons per year. Additionally, Crimson is currently engaged in systems verification testing or a commercial-scale facility that will convert waste products from dairies in the southern central valley of California into either pipeline quality gas and electricity.

Comments on Executive Summary (Pages ES1 – ES9)

- Page ES-3, 1st paragraph – There is a reference to The Bioenergy Action Plan, June 2006 and its biofuels use target, "…specific biofuels use targets in California of 9.3 million gasoline gallon equivalents in 2010, 1.6 billion in 2020, and 2 billion in 2050."I believe that the figure of 9.3 million gasoline gallons equivalent for 2010 is incorrect and

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that this should be 1.0 billion gallons. The 1.0 billion gasoline gallons equivalent for 2010 figure is cited elsewhere in The Plan on page 29.

- Page ES-4, 1st paragraph – It is not clear how the "optimal alternative fuels mixes" were determined. To my knowledge, no such "optimal alternative fuels mixes" were provided in pervious drafts of the Plan nor in the Scenario Analyses. Additionally, the CEC technical staffs that I have spoken with are not aware of any methodology used to determine the "optimal alternative fuel mixes" for The Plan. What are these "optimal alternative fuels mixes" and what methodology was used to determine this?
- Page ES-5, Fuels (first bullet) – "Primary biofuels include ethanol and other biofuels, such as biomethene, produced from agricultural, forestry and urban wastes, biomethane, sugar cane, and other renewable feedstocks." I do not understand how biodiesel/renewable diesel are explicitly noted as "primary biofuels". Diesel consumption accounts for 4.2 billions gallons (3.1 billion as transportation fuel, 1.1 billion as off-road) versus 16.7 billion gallons of gasoline annually (2006 figures from CEC). During the 2000 through 2005 period, the aggregate growth in gasoline consumption in California was 10.7% versus 16.7% for diesel (source: Energy Information Agency). In the Scenario Analyses prepared for the Plan, diesel is projected to grow at a similar accelerated pace compared to gasoline. The introduction of diesel cars in California in the 2008-2011 timeframe will further accelerate diesel's growth as a percentage of all transportation fuels. Ethanol and biomethane cannot be used in diesel engines and thus cannot provide any displacement of petroleum diesel. Therefore, how can biodiesel/renewable diesel not be explicitly considered a primary biofuel produced form renewable feedstocks. Perhaps it is more accurate to say ""Primary biofuels include ethanol, biodiesel and other biofuels, such as biomethane, produced from agricultural, forestry and urban wastes, biomethane, sugar cane, and other renewable feedstocks."
- Page ES-6, Fuels (first bullet at the top of the page) – "California will need 30 to 60 new biofuels production plants and proven performance of biofuels with gasoline and/or will need installation of 2,000 biofuel fueling stations to reach its goals." Based on the same rationale as noted in my comments immediately above, I suggest that this paragraph be amended to read as "....and proven performance of biofuels with gasoline and diesel and/or will need installation of..."
- Page ES-7 Cost (first bullet) – "Except for ethanol and Hydrogen, all other alternative fuels are less costly today than gasoline and diesel on f fuel use, cents per mile basis." This statement is not necessarily true. In the various drafts of the Scenario Analysis in the Renewable Diesel and Biodiesel sections, biodiesel and renewable diesel costs were described as potentially higher than the wholesale cost of petroleum diesel, even after the deduction of the $1.00/gal Federal blending tax credit. For instance, in the wholesale market over the last six months soy biodiesel has traded $0.10 to $0.45 per gallon higher than OPIS Rack Diesel whereas tallow/animal fat biodiesel has traded at $0.05 higher to $0.15 under OPIS Rack Diesel. In the Scenario Analysis, Biodiesel and Renewable Diesel were estimated to have production and distribution costs of $1.00 per gallon or more compared to petroleum diesel, requiring incentives to bring its cost to diesel levels. In the Scenario Analysis, total Federal and State incentives worth $1.00 to $3.00 per gallon were evaluated to gauge a potential price supply relationship.

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Comments / Concerns on Chapter 2

- Chapter 2, Page 14, 4th paragraph – "Renewable diesel can be used in diesel engines with no major modifications. Two percent (B2) and 5 percent (B5) blends have been used in vehicles in California and up to 20 percent renewable diesel and biodiesel blends may be possible." First of all, the first sentence does not specifically mention biodiesel. Elsewhere in the Plan, Biodiesel and Renewable Diesel are represented as similar but distinctly different fuels. Since there is no Renewable Diesel currently being used in California beyond a test basis, I think the omission of Biodiesel is material.

  The second part of the statement is not accurate and is misleading as to how biodiesel / renewable diesel blends are currently being used in the market. B2 blends are typically only used in states that have a B2 biodiesel mandate or as an alternative to using ULSD lubricity additives. In California, there is no biodiesel mandate and none of the refiners or terminals are using B2 as a alternative to ULSD lubricity additives and B2 is not used by end-users(fleet operators, municipalities, school districts, Department of Defense, etc.). Likewise, B5 is rarely utilized by end-users, although there have been a few instances where biodiesel has been blended at the B4.9 level in California by one or two terminals in California and certain service station/truck stop operators. The vast majority of biodiesel consumption in California is B20 – witness the B20 usage by the cities of San Francisco, Santa Monica, Glendale, fleet users such as Caltrans, PG&E, and Safeway, military users such as Lemore Naval Air Station, Twenty Nine Palms, Travis AFB, Vandenburg AFB, and Camp Pendleton and several school districts. In some cases, higher levels of biodiesel are being used , i.e. B40 is being used by PG&E, Royal Caribbean Cruise Lines has used B99.9, City of Santa Monica has been testing B50,and a limited number of retail service stations offering B99.9 in the San Francisco, LA and San Diego areas. Thus, this sentence should be modified to read as follows: "Biodiesel and Renewable Diesel can be used in diesel engines with no major modifications. Twenty percent (B20) blends have been used in vehicles in California and is the most common blend level utilized in the California fuel market. Up to 50 percent renewable diesel and biodiesel blends may be possible."

- Chapter 2, Page 15, General Biofuels #4 (near top of the page) – "Improve and expand terminal storage of fuel and transport logistics in California to account for increased transportation fuel demand and biofuels production." This sentence is not worded in a way that reflects the problems surrounding biofuels distribution. The problem is not simply increasing demand for transportation fuels – this is in effect a universal problem regardless of what happens with alternative fusel in the marketplace. And the problem is not increased production pf biofuels – the problem is how to get the biofuels to the marketplace, specifically to the bulk/wholesale terminals where all diesel and gasoline is currently distributed into the market. In the Scenario Analyses for Ethanol and Biodiesel/ Renewable Diesel, it was made clear as a near/immediate–term action item that the infrastructure problems are (i) the need for segregated biofuels storage, blending systems and rack and terminal management stems integration at each existing bulk/wholesale fuels terminal and (ii) the need for segregated bulk storage capacity sufficient to receive biofuels at port facilities from abroad via ocean transport. Thus, perhaps a better version of this sentence would be: "In general, improve and expand

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segregated terminal storage of fuel and transport logistics in California to account for increased transportation fuel demand and biofuels production. Improve and expand segregated storage for biofuels at port facilities and at each terminal and establish biofuels blending systems and integration with existing rack loading and terminal management systems at each terminal."

- Chapter 2, Page 15, Renewable Diesel and Biodiesel Actions #1 – "Develop renewable diesel and biodiesel production plants in California to displace 1 billion gallons of diesel over 10 years." This sentence misses the point of the Plan -- the point is to displace petroleum diesel, not establish a minimum amount of instate production capacity (this was clearly stated in the various scenarios explored in the Scenario Analyses). Furthermore, the issue of instate production is addressed in comparatively weak terms in #6 ("Encourage instate production of renewable diesel and biodiesel supplies which are currently being imported into California."). I think the first bullet under Renewable Diesel and Biodiesel Actions is to establish the displacement goal –" Displace 1 billion gallons or more of petroleum-based diesel per year within 10 years. " If the CEC and ARB want to establish a firm target for instate production, then this should be addressed in # 6.
- Chapter 2, Page 16, Renewable Diesel and Biodiesel Actions #4 – The issue of sustainability and development of sustainability standards is already being addressed by certain feedstock industries such as the palm oil industry. The problem with the state adopting sustainability standards is that it must do so for each type of feedstock use dinthe production of biodiesel and renewable diesel. How do you address domestic soy oil or canola oil that comes from farm land that was created hundreds of years ago thru deforestation? How does this compare to Palm Oil where that industry is now developing and adopting sustainability standards that are being driven by major consumer products companies. I think it makes a lot of sense to adopt sustainability standards that have been developed whenever possible rather than starting from scratch. Perhaps this sentence can be modified to read as follows: "Where needed, facilitate the development 'sustainability standards' for biodiesel and renewable diesel feedstocks (i.e. soy oil , canola oil, palm oil, jatropha oil, waste grease and other sources), and to the extent that 'sustainability standards' have been developed for biodiesel and renewable diesel feedstocks, these shall be adopted (i.e. those currently being developed for the palm oil industry)."
- Chapter 2, Page 16, Renewable Diesel and Biodiesel Actions #6 – See comments above for page 15, #1. Additionally if the Governor's Bioenergy Action Plan calls for a minimum instate production level of 20% of all biofuels consumed instate, then perhaps the sentence should read as follows: "Ensure that a minimum of 20% of all biodiesel and renewable diesel consumed in California each year is produced instate."
- Chapter 2, Page 16, Renewable Diesel and Biodiesel Actions #7 – This statement implies that biodiesel/renewable diesel is a niche market application only. The Low Carbon Fuel Standard will likely create market conditions that are a de-facto mandate for biodiesel and renewable diesel blending (similar to current 5.7% mandated ethanol blending) due to the GHG and carbon emissions benefits for these biodiesel and renewable diesel relative to ethanol and possibly other alternative fuels. Additionally, the Scenario Analysis clearly operated from the perspective for moving biodiesel and renewable diesel fuel into the mainstream to achieve maximum displacement of

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petroleum-based diesel. As such, the bigger issue is the current lack of infrastructure at the terminals to support biodiesel and renewable diesel blending – this a serious enough situation to require it's own recommendation (See bullet immediately below.). This is the real problem, not a lack of retail fueling. All that said, consumer and market education and outreach is still a positive thing.

- Chapter 2, Page 16, Renewable Diesel and Biodiesel Actions -- Need for an additional immediate term action. To address the problem of the lack of segregated storage, blending systems and rack and terminal systems integration at existing bulk/wholesale fuel terminals, the State either needs to issue some sort of mandatory requirement or it needs to provide incentives for terminal operators to make the necessary investment. Given the Governor's reluctance to utilize mandates, I would suggest the following: "Establish grant programs, tax credits and/or other incentives to encourage the installation of segregated storage for biofuels and the establishment of biofuels blending systems and integration with existing rack loading and terminal management systems at each bulk/wholesale fuel terminal."

Other Comments / Concerns

- Pg. 23, Figure 4 – This excludes the Well-to-Wheels evaluated light duty diesel vehicles with B20 and Renewable 30% blends, valued at 36 and 41% GHG reduction respectively. This is a significant GHG performance amongst the other longer term, more expensive options.
- Pg. 32, Table 4 – The figures provided for renewable diesel seem to come from the 'business as usual' case in the Scenario Analysis, not the moderate case assumptions as stated in this draft of the Plan. The volumes provided in the Scenario Analysis for renewable diesel (which includes biodiesel) under the moderate case showed significantly higher volumes in these timeframes.