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Kevin Drude
Santa Barbara County Planning and Development Dept.
123 E. Anapamu Street
Santa Barbara, CA 93101

RE: Notice of Preparation of EIR For American Ethanol Inc. Corn Ethanol Plant

Dear Mr. Drude:

The Attorney General submits these comments regarding the County's Notice of Preparation of an environmental impact report ("EIR") for the American Ethanol, Inc. corn ethanol plant proposed to be built near Santa Maria.[1] We request that you consider these comments in preparing the draft EIR.

The proposed project will produce 110,000 million gallons per year of ethanol from corn imported from the Midwest, to be shipped by truck or rail to blending facilities in California. The production process will produce a distillers' grain co-product, which the project proponent contemplates drying for shipment by rail or truck to buyers' locations. It is estimated that the production process will produce 366,000 tons of carbon dioxide (CO2) per year, to be released to the atmosphere. In addition, greenhouse gases will be emitted by plant operations and equipment, transportation of corn feedstock to the plant, and shipment of products to market.

We encourage the County to fully assess and analyze in the EIR the greenhouse gas emissions of constructing and operating this type of ethanol plant at this location, including not only the carbon dioxide that operation of the plant will emit at the site, but emissions involved in importing corn from the Midwest to serve the plant, drying the distillers' grain, and transporting finished products to buyers. We urge the County to consider all feasible mitigation measures to avoid, minimize or offset the anticipated global warming impact of the proposed project.

Global warming is the most serious environmental problem facing California and the nation. While construction of corn-ethanol plants in the state will provide a source of alternative fuel as well as oxygenate for blending a more climate-friendly fuel than unblended gasoline, the greenhouse gas emissions associated with the production must be fully disclosed and mitigated.

[1] These comments are not made on behalf of any other California agency or office.

Climate Change

Emissions of greenhouse gases accumulate in the atmosphere and cause the trapping of heat near the Earth's surface. Increased atmospheric concentration of these gases causes increasing average temperatures on a global scale, with adverse impacts on humans and the environment.[2] According to NASA's James Hansen, proceeding at the emissions rate of the past decade will result in "disastrous effects, including increasingly rapid sea level rise, increased frequency of droughts and floods, and increased stress on wildlife and plants due to rapidly shifting climate zones."[3] The impact on human health of continuing current emissions rates is expected to be severe, including more widespread incidence of vector-borne diseases such as malaria, declining crop productivity and fish stocks, worsening of ground-level ozone causing adverse pulmonary and cardiovascular health, decreased water supplies, more extreme weather events, flooding and drought with consequent effects on infrastructure.[4]

The atmospheric concentration of carbon dioxide (CO_2), the leading GHG, is now 379 parts per million (ppm), higher than any time in the preceding 650,000 years.[5] According to experts, an atmospheric concentration of CO_2 "exceeding 450 ppm is almost surely dangerous" to human life because of the climate changes it will effect, "and the ceiling may be even lower."[6] Past and current GHG emissions have pushed us to a tipping point, where strong amplifying effects on the climate are activated by only moderate additional warming.[7] Experts predict that if we continue "business as usual" emissions trends, atmospheric concentrations of CO_2 will likely

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[2] Intergovernmental Panel on Climate Change, Fourth Assessment Report (IPCC 4th) (2007), Working Group (WG) I, Frequently Asked Question 2.1, *How do Human Activities Contribute to Climate Change and How do They Compare with Natural Influences?* http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_FAQs.pdf.

[3] http://www.giss.nasa.gov/research/news/20070530/; see also *Hansen et al., Dangerous Human-Made Interference with Climate* (2007) 7 Atmos. Chem. Phys. 2287–2312 http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf.

[4] IPCC, *Climate Change Impacts, Adaptation, and Vulnerability, Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report, Summary for Policymakers* at 7-9 (2007). http://www.ipcc-wg2.org/

[5] IPCC 4th, WG I, Frequently Asked Question 7.1, *Are the Increases in Atmospheric Carbon Dioxide and Other Greenhouse Gases During the Industrial Era Caused by Human Activities?* http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_FAQs.pdf

[6] See http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html

[7] See http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html

exceed 500 ppm by the end of the century.[8]

Through Executive Order S-3-05, and AB 32, the Global Warming Solution Act of 2006, the Governor and Legislature recognized California's vulnerability to the adverse effects of climate change and the urgent need to curb emissions. California is committed to reducing emissions to 1990 levels by 2020, and 80% below 1990 levels by 2050. Achieving the 2020 target will require California to reduce emissions by at least 29% below projected levels.[9] And, experts say we have very little time to take decisive action.[10] Rajendra Pachauri, Chairman of the United Nations Intergovernmental Panel on Climate Change ("IPCC") recently declared: "If there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment."[11]

Pursuant to these mandates, the California Air Resources Board (CARB) is developing a low carbon fuel standard (LCFS) that will shape the fuel industry in California. The LCFS will require fuel providers to ensure that the mix of fuel they sell in California meets, on average, a declining standard for GHG emissions. The LCFS will measure the carbon emissions of a fuel on a "lifecycle" or "field to wheel" basis (including, e.g., upstream feedstock extraction, fuel refining, and transport to market) in order to include all emissions from fuel production and consumption that contribute to global warming. Compared to ethanol manufactured from cellulosic or waste materials, corn ethanol may not be sustainable over the long-term when viewed through a field to wheel carbon measure,[12] and may not answer California's fuel needs under the LCFS.[13] Alternative fuels made from plant or waste materials other than food crops

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[8] Long term scenarios developed by the IPCC, which cover a wide range of future characteristics, project dramatic increases in CO_2 concentrations in the atmosphere under all projected scenarios, ranging from 535 ppm to 983 ppm by 2100, 41% to 158% higher than current levels. See http://www.epa.gov/climatechange/science/futureac.html.

[9] California Energy Commission, 2007 Integrated Energy Policy Report, December 2007, at p. 16. See http://www.energy.ca.gov/2007_energypolicy/index.html

[10] http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html (NASA's James Hansen concludes business-as-usual "would be a guarantee of global and regional disasters.")

[11] Rosenthal, *U.N. Chief Seeks More Leadership on Climate Change*, N.Y. Times (November 18, 2007).

[12] See *Cellulosic Energy Research and Development*, U.S. Dept. of Energy, available at: www.eere.energy.gov/afdc/fuels/ethanol_research.html?print

[13] See, e.g., Natural Resources Defense Council, *Ethanol: Energy Well Spent* (Feb. 2006) at p. 2-3; Governor's white paper, The Role of a Low Carbon Fule Standard in Reducing

may not only be sustainable (carbon neutral), but have potential to be carbon-negative.[14]

CEQA Requirements

As the Legislature recognized, global warming is an "effect on the environment" under the California Environmental Quality Act ("CEQA"), and an individual project's contribution to global warming can be significant.[15] CEQA was enacted to ensure that public agencies do not approve projects unless feasible measures are included that mitigate the project's significant environmental effects.[16] CEQA requires that "[e]ach public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so."[17] This requirement is recognized as "[t]he core of an EIR."[18]

Evaluation of GHGs and Significance

The NOP relates that the state is "in the process of promulgating a CEQA threshold for greenhouse gases, but has not yet adopted one," and that guidelines for feasible mitigation of GHGs may be developed by mid-2009. Whether or not the state or any agency ultimately adopts regulatory thresholds or mitigation guidelines that would apply to this type of project, the lack of official thresholds and guidelines does not absolve the County from the obligation under CEQA to determine the significance of, and adopt feasible mitigation for, the anticipated greenhouse gas emissions of this project.

Greenhouse Gas Emissions and Protecting Our Economy (Jan. 2007) at p. 5. See also U.S. Dept. of Energy, Energy Efficiency and Renewable Energy Biomass Program, availalbe at: www1.eere.energy.gov/biomass/printable_versions/news_detail.html?news_id=10603

[14] See David Tillman, et al: *Carbon-Negative Biofuels From Low-Input High-Diversity Grassland Biomass,* Science, v. 314 (Dec. 2006) at 1598. This study finds that biofuels made from low-input high-diversity (LIHD) native grasslands can provide more usable energy and far greater GHG reductions than corn ethanol. High-diversity grasslands had 238% higher bioenergy yields than monoculture yields after a decade. LIHD biofuels are carbon negative because net ecosystem CO2 sequestration exceeds CO2 release during biofuel production.

[15] See Pub. Res. Code section 21083.05, subd. (a); see also Sen. Rules Com., Off. of Sen. Floor Analyses, Analysis of Sen. Bill No. 97 (2007-2008 Reg. Sess.) Aug. 22, 2007.

[16] Public Resources Code § 21002.

[17] Public Resources Code §§ 21002.1(b) and 21081; see also, *Mountain Lion Foundation v. Fish and Game Commission,* 16 Cal.4th 105, 134 (1997).

[18] *Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara County* (1990) 52 Cal.3d 553, 564-65.

The draft EIR should fully account for the GHG emissions of operating a corn ethanol plant at the proposed location, taking into account energy and transportation requirements to produce and market both the ethanol and the distillers grain co-product. The NOP promises "a project-specific analysis that will estimate the amount of the energy that would be consumed to operate the proposed ethanol plant, including to produce and transport the plant's feedstock (corn) to the site, and to transport the ethanol and other product(s) to their destinations." This type of project-specific analysis can be applied to GHG emissions sources as well.

Mitigation Measures and Alternatives Analysis

The requirement that a public agency mitigate or avoid the significant effects on the environment of projects that it approves whenever it is feasible to do so is at the heart of the EIR process. The NOP notes that the EIR will identify and assess the feasibility of incorporating into the project measures such as co-generation, carbon dioxide capture, and measures that could reduce the amount of fuel used to transport corn to the site (such as train-engine re-manufacture and train idling restrictions) and the amount of fuel used to transport ethanol from the site to blending facilities (such as the use of 2007 and newer model trucks). The project also proposes to use reclaimed water from the local sanitation district. The NOP appears to commit the plant to the production and marketing of dried distillers grains as a co-product – which typically involves an energy-intensive drying process and longer transport distances than local marketing of wet distillers grains. We urge the County to evaluate and discuss in the EIR all reasonable project alternatives and feasible mitigation measures to address the anticipated sources of greenhouse gas emissions of this project including, if necessary to reduce the project's emissions to a level of insignificance, the purchase of offsets or credits[19].

Sincerely,

/S/

RAISSA S. LERNER
Deputy Attorney General

For EDMUND G. BROWN JR.
Attorney General

[19] For an example of an offset program established through the local air district, see the Attorney General's settlement with ConocoPhillips, available for downloading at: http://ag.ca.gov/globalwarming/pdf/ConocoPhillips_Agreement.pdf.