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Via Electronic Submittal

December 15, 2011

Clerk of the Board
California Air Resources Board
Headquarters Building
1001 "I" Street
Sacramento, CA 95812
Electronic Submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Re: December 16, 2011 Board Hearing; Agenda Item 11-10-1: Public Meeting to Hear a Report on the First Formal Review of the Low Carbon Fuel standard Program, and an Update on the Low Carbon Fuel Standard Sustainability Provisions; and **Agenda Items 11-10-2:** Public Hearing to consider Amendments to the Low Carbon Fuel Standard Regulation

Dear Clerk of the Board,

Shell Oil Products US appreciates the opportunity to comment on the Board's consideration of the Report of the First Formal Review of the Low Carbon Fuels Standard Program and the proposed Amendments to the Low Carbon Fuel Standard Regulation. Shell is a regulated party under these regulations and, therefore, has a direct and significant interest in these issues.

At Shell, we understand that the demand for energy will continue to grow both in the developed and developing world. This means greater demand for oil and gas. However supplies of readily accessible oil and gas cannot keep up with the growth in energy demand. As a result, society will need to add other sources of primary energy, including solar, wind, biofuels and fossil fuels from oil sands and oil shale. Furthermore, even with huge improvements in energy efficiency and growth in renewables and other alternatives like electricity, fossil-based fuels will remain the predominant part of the transport fuel mix at least through the first half of this century. New vehicle technology and new infrastructure (if required to support significant alternatives such as hydrogen fuel cell and electric vehicles) will take time to develop and penetrate the market.

More energy means more CO₂ emitted at a time when climate change looms as a critical global issue. The societal imperative to limit greenhouse gases in the atmosphere to a level that equates to a 2 degree C temperature rise will require the strict management of CO₂ emissions from both the production of energy and its use by consumers. At Shell,

we take these issues seriously. Helping to meet future global demand for energy and taking a leadership role in tackling greenhouse gas emissions are priorities at Shell.

Shell supports action to address greenhouse gas emissions and climate change and believes that biofuels, particularly advanced biofuels, can provide significant reductions in greenhouse gas production on a “well to wheel” basis for the road transport sector. We are already probably the world’s largest distributor of fuel containing bio-components, and we have technology development programs in advanced bio-components that have the potential to offer the lowest overall greenhouse gas production, without taking resources from the food chain for conversion to fuel.

It is against this background, and in an effort to ensure that California develops a workable Low Carbon Fuels program, that we offer comments on the First Formal Review of the Low Carbon Fuel Standard Program, and the proposed Amendments to the Low Carbon Fuel Standard Regulations. We participated in the development of the Western States Petroleum Association’s (WSPA) comments on these issues and generally support the comments submitted by WSPA. We are writing separately, however, to emphasize a few key points from our perspective.

I. First Formal Review of the Low Carbon Fuel Standard Program and Update on the Low Carbon Fuel Standard Sustainability Provisions; Agenda Item 11-10-1.

Shell appreciated the opportunity to participate on the advisory panel and looks forward to participating on the next panel and any intermediate reviews. As noted in the report, it will be important for ARB to closely monitor the evolution of the program to ensure that the standards remain feasible at all times.

Shell continues to have concerns regarding the achievability of the LCFS. Our analysis is consistent with the analysis that the Western States Petroleum Association presented to the Advisory Panel,¹ which indicates that the LCFS likely becomes infeasible before 2015. Shell continues to believe that it is critical that the ARB establish reasonably achievable standards. This is critical to ensure that the LCFS does not have unintended serious adverse consequences for consumers and the economy of the State, as well as creating the right environment that will encourage significant investments in alternative fuels.

The Board should consider that there continue to be significant challenges in the commercialization of tomorrow’s advanced biofuels such as those using cellulosic feedstocks and “drop-in” biofuels which are fully fungible with gasoline and diesel. Many biofuel feedstocks and process technologies that are promising at bench scale are just beginning to be developed through the scale-up process. If successful they may reach commercialization within the next ten years.

¹ Comments of Gina Grey, WSPA, from June 30/July 1 Advisory Panel meeting; 7/21/2011.

Regulators should work with industry to create stable, long-term policy frameworks for biofuels to increase investor confidence and allow for the sustainable expansion of biofuel production. A critical aspect of this is that biofuel targets must be economically and technically achievable by obligated parties, with incentives aligned with compliance requirements and goals that include realistic timescales for implementation. If they are not viewed as such, investor confidence will be low.

Even when regulators attempt to establish achievable standards, there is uncertainty regarding the pace of technology development and deployment. In addition, the unexpected can and does occur. Consequently, it is Shell's belief that regulations should anticipate these uncertainties by including well-designed alternative compliance mechanisms or "safety valves" to ensure adequate fuel supplies and provide long-term regulatory certainty for investors in better-performing biofuels. We urge the Board to direct ARB staff to continue to develop the alternative compliance mechanism concept.

Shell participates on the Sustainability Workgroup and continues to advocate for the adoption of internationally agreed/aligned sustainability criteria for biofuels. In addition, we believe that the adoption of sustainability criteria is a better way to deal with indirect land use change (iLUC) effects than the imposition of highly uncertain factors on biofuels. We are concerned that highly uncertain ILUC factors would do very little to address the underlying problems associated with ILUC but could instead create negative, unintended consequences such as greater ILUC risks and increased costs to consumers.

II. Proposed Amendments to the Low Carbon Fuel Standard; Agenda Item 11-10-2.

We appreciate ARB recognizing issues with the "HCICO" approach in the existing LCFS regulation and proposing that all gasoline and diesel receive the same WTW carbon intensity regardless of crude type. However, we believe the "California Average" approach does not fully address CARB staff's stated guiding principle "d" on page 81 of the "ISOR" regarding crude shuffling to other jurisdictions and designing a program that can be exported to other jurisdictions. Shell urges ARB to adopt a "Worldwide Average" approach to crude carbon intensity, because crudes are marketed, traded and used globally. Any potential increase in the carbon intensity of crude production could still be captured in periodically updating the world wide average for a given year versus the worldwide average in the 2010 baseline year to ensure that any increases are mitigated.

We appreciate that ARB staff strives to encourage innovation and investment in technology that will reduce the carbon intensity of fuels, including carbon capture and storage (CCS) technology and support the principle of regulated parties being able to earn LCFS credits if it obtains crude from sources that have implemented innovative

methods such as CCS to reduce emissions for crude recovery. However the proposed regulatory amendment includes a 5.00gCO₂e/MJ minimum threshold for the reduction in the carbon intensity for crude oil recovery (well to refinery entrance gate) to qualify for LCFS credits. We believe it is premature to include such a threshold value at this time. Such a threshold could actually act as a barrier to the developments of such projects and actually act to discourage work in this field. Furthermore, if such innovative methods have been used to reduce the actual carbon intensity of crudes that are imported into California, then this actual carbon intensity should be used in the Annual Crude Average carbon intensity calculations for the relevant year.

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Shell Oil Products US appreciates this opportunity to comment on the First Formal Review of the LCFS program and the proposed Amendments to the Low Carbon Fuels Standard Regulations.

Sincerely yours,

/s/ John E. Reese

Advocacy Excellence Manager NA