

Akerman Practice Update

CLIMATE CHANGE

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Greenhouse Gas Emission Reduction Moves to the Forefront of Transportation Policy

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Transportation policy in the United States is going Green. Over the last several months, a number of ground-breaking steps have been taken at both the federal and state level to reduce the greenhouse gas (GHG) emission footprint produced by motor vehicles and other modes of transportation. It has been a two-pronged attack, focusing both on the fuels that are used to power automobiles, trucks and other forms of transport, and the design of the vehicles themselves. These new GHG-reducing measures will force reliance on less carbon intense sources of motive energy, but will come at a cost in terms of what we pay for the personal mobility we enjoy on a daily basis and for the transported goods that we need to maintain our standard of living.

The federal elements of this program include more stringent vehicle emission standards and renewable fuel requirements. The State of California, often a pioneer in things environmental, has taken the GHG emission reduction effort one step further by enacting the world's first carbon fuel content regulations. Each of these initiatives is briefly discussed below.

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U.S. Vehicular Emission Standards

On May 19, President Obama announced a comprehensive plan to both cut vehicle emissions and increase CAFE (corporate average fuel economy) requirements for new

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motor vehicles. This is the first time that tailpipe requirements aimed at reducing pollution have been combined with fuel efficiency objectives. The new requirements will apply to vehicles manufactured for the 2012 through 2016 model years. These standards will, among other things, boost average fuel economy for automobiles to 35.5 mpg by the year 2016, four years earlier than otherwise would have been the case.

This accelerated phase-in of more fuel-efficient vehicles will align federal tailpipe standards for GHG emissions with the more stringent standards for vehicles sold in California that have been promulgated by the California Air Resources Board and, in theory, produce a single set of national vehicular emission requirements. They will also render moot the long-running court battle between the automakers and the environmental community over the wisdom and legality of allowing California to set its own tougher emission regulations. The Obama Administration projects that the new standards will produce more than a 30% gain in fuel economy when fully implemented. They are also projected to produce a 1.8 billion barrel savings in the amount of oil consumed over the life of the program and an approximate 900 million metric ton reduction in GHG emissions.

U.S. Renewable Fuel Standard Program

While the Renewable Fuel Standard Program, aimed at reducing the United States' dependence on foreign sources of crude oil, has existed since 2005, implementation of new program requirements included in the Energy Independence and Security Act of 2007 is accelerating this effort and strengthening its GHG reduction element. This is accomplished by significantly increasing the volumes of several categories of renewable fuels that must be used to supplant gasoline between now and 2022, expanding the program to include diesel fuel intended for highway, off-road vehicle, locomotive and marine vessel use, and, for the first time, imposing mandatory GHG reduction thresholds that must be met for particular fuels or batches of fuels to be considered “renewable,” thresholds that are from 20% to 60% lower than the emissions from a baseline 2005 petroleum fuel against which they are being compared.

Of particular note, the threshold concept requires that GHG emissions for each renewable fuel category be evaluated over its “full lifecycle” - a cycle that includes the emissions associated with producing or growing the fuel's feedstock, transporting it to market, producing, distributing and blending the fuel, and its end use. Perhaps most significant, any emissions that result from associated land use changes must also be included in the lifecycle calculation. The prototypical example is the increase in GHG emissions that is anticipated to occur in foreign countries as a result of deforestation to create cropland on which to grow corn to replace the U.S. corn

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exports that are expected to drop due to conversion of domestic lands on which food crops have historically been grown to fuel production. For a particular batch of fuel to qualify as renewable it must meet or exceed the GHG reduction threshold established for that particular fuel type.

The foregoing modifications to the Renewable Fuel Standard Program are estimated to result in displacement of about 15 billion gallons of petroleum-based gasoline and diesel fuel, most of it imported, and an 11% reduction in annual gasoline and diesel consumption by 2022. The U.S. Environmental Protection Agency has only recently issued the proposed regulations, known as the “RFS2” regulations, that would implement these changes in the program. Consequently, there could be significant changes before they are finalized.

California Low-Carbon Fuel Standard

On April 23, the California Air Resources Board adopted the most stringent and focused of the new programs for addressing transportation-related GHG emissions. Known as the “Low-Carbon Fuel Standard” or “LCFS”, this new state regulation aims to reduce GHG emissions from vehicles and other transportation modes in California by 10% or 16 million metric tons by the year 2020. It will do so by requiring the producers of all fuels for use in motor vehicles, trucks, intrastate locomotives and marine craft to meet progressively more stringent annual “carbon intensity” requirements. The LCFS is similar to the federal RFS2 regulations in its requirement that each of the different fuel types be assessed on a full lifecycle basis. That basis includes the fuel’s indirect impacts on GHG emissions, as well as its production pathway, and results in an agency-assigned relative carbon intensity value. However, unlike the RFS2 regulations, the specific volumes of different renewable fuel types that must be used are not specified. Individual fuel suppliers remain free to meet the annual emissions cap using whatever combination of fuels, including petroleum-based fuels, that it wishes. If necessary, a provider can also use credits it has created by supplying fuels that exceeded the carbon intensity requirement in a prior year or purchased from other providers that are supplying less carbon intense fuels than required by the regulation.

Thus far, production of ethanol from corn and Brazilian sugarcane are the only fuel types and pathways for which an “indirect land use change” or “ILUC” carbon intensity value has been assigned by the Air Resources Board. These values are predicated on assumptions concerning the amount of deforestation that will be required to replace crop land converted to fuel production. The ILUC value for corn ethanol is roughly half again as high as the value for the product’s direct GHG emissions, resulting, in

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some cases, in a total carbon intensity value for corn ethanol that exceeds that of gasoline. The theory is that grain exports from the United States will plummet due to the increased use of land now used to grow corn as a food crop for ethanol production. One particular model estimates that corn exports will decrease by 62 percent and that soy exports will decline by 28 percent as land use changes from food to fuel crops. The ethanol industry argues that this assumption is one-sided and unfairly applies ILUC penalties to land used for corn ethanol production without also taking into account the indirect carbon impacts of petroleum, including the costs associated with the protection of oil supply in the Middle East and the GHG emissions resulting from the storage, transportation and disposal of oil production waste products.

The Air Resources Board asserts that the LCFS will result in a 70% greater reduction in GHG emissions than the mandate and threshold approach embodied in the federal RFS2 regulations. Other states, including those that are members of the Regional Greenhouse Gas Initiative, have indicated that they plan to adopt programs based on the California model in the near future.

Evaluating the Costs

As noted earlier, while reducing the transportation sector's GHG footprint, the foregoing measures will not be without their costs. The Obama Administration estimates that the new federal auto emission standards will add approximately \$1,300 to the price of a new motor vehicle by 2016.

The cost impact of the federal RFS2 regulations will depend on the form that the proposal currently being considered ultimately takes but has been preliminarily estimated at several cents to as much as 10 cents a gallon. While the Air Resources Board staff contends that California's LCFS will not significantly impact the price or supply of transportation fuels, this conclusion is seriously questioned by many economists and, even the staff acknowledges that significant strides will be required in the production of advanced biofuels in order to implement either the RFS2 or LCFS fuel regulations.

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