This post, by David Pettit of the Natural Resources Defense Council, is part of an occasional series by guest bloggers.

As Ann Carlson and Rick Frank have previously blogged, on December 29th 2011, U.S. District Court Judge Lawrence J. O'Neill ruled that California's low carbon fuel standard (LCFS) violates the Commerce Clause of the U.S. Constitution, on its face, by both discriminating against out-of-state corn ethanol and crude oil and regulating activities occurring wholly outside California. Judge O'Neill enjoined the California Air Resources Board (CARB) from implementing the LCFS, pending appeal to the U.S. Court of Appeals for the Ninth Circuit. CARB and the defendant-intervenors in the case, including NRDC, have appealed the injunction and the merits rulings.

As Ann pointed out, the LCFS is part of California's GHG reduction strategy under AB32 and is expected to produce roughly 15% of the reductions needed to return to 1990 levels of GHG emissions by 2020. It is designed to incentivize all producers of motor fuels, including gasoline and corn ethanol, to reduce by 10% the carbon intensity of motor fuels sold in California. I'd like to get into the weeds for a bit and describe how the LCFS works in some detail, the better to discuss the basis for and potential consequences of Judge O'Neill's ruling.

The LCFS is a performance based standard that works by assigning a carbon intensity score to all transportation fuels and setting up a trading system for credits. All producers, both domestic and importers, must meet the average carbon intensity standard for their fuel products. Producers of fuels with a carbon intensity score greater than the standard set by CARB can meet the standard by selling more lower-carbon fuels, using banked credits, or purchasing credits from other fuel providers. This raises the value of lower-carbon intensity fuels and decreases the value of higher carbon-intensity fuels.

The carbon intensity scores are calculated using a GHG lifecycle analysis based on an analytical tool, really a huge Excel spreadsheet with the acronym "GREET," developed at the Argonne National Laboratory, in addition to other modeling tools. It is essential that the intensity score account for the lifecycle GHG profile for a motor fuel, otherwise a fuel that is actually creating a lot of emissions during its production process could end up with an artificially low carbon intensity score if those emissions are ignored. AB 32 requires the state to reduce total GHG pollution, not just some. I'll return to this point a bit later in discussing Judge O'Neill's ideas about a carbon tax as an alternative to the LCFS.

With respect to corn ethanol, Judge O'Neill identified two ways in which CARB's methodology violates the Commerce Clause: transportation and energy use.

Judge O'Neill wrote that out-of-state producers of corn ethanol were punished by use of the transportation factors in GREET because those factors increase carbon intensity scores for out-of-state but not in-state producers. However, a closer look at the GREET model shows that this is not so. In fact, California producers of corn ethanol are punished in terms of carbon intensity because of the GHGs emitted in transporting the corn feedstock to ethanol plants in California. Basically, we don't grow enough corn here and so we have to import it from the Midwest and elsewhere. Those emissions increase California corn ethanol's score more than the Midwest producers' scores are increased by having to ship their finished product to California, placing California producers at a disadvantage relative to Midwest producers in terms of transport emissions.

With respect to energy use, the GREET model evaluates GHGs emitted in the production of electricity used at an ethanol plant, and GHGs emitted from producing heat used in the plant to make ethanol, which may or may not be from electric power. For example, a large fraction of the electrical power in the Midwest comes from coal-fired electrical plants, and some of the Midwest producers use coal as a heat source in their facilities. In California, by contrast, there is little coal-fired electricity and no use of coal to provide heat in California ethanol plants. California producers tend to pay a higher price per unit electricity for this cleaner electricity, in addition to other factors. The GREET model takes this into account for the Midwest by assigning an average GHG score to all Midwest ethanol plants based on government and industry data. CARB modified the GREET model to use California data for both electricity generation and heat. The treatment of these factors in the GREET model is the single largest reason why carbon intensity scores for California-produced ethanol are lower than those for Midwest-produced ethanol using the same production process. If California producers used higher carbon inputs, this would be reflected in their score in the same fashion and if Midwest producers use lower carbon inputs, they can apply for lower scores as some companies are doing already through biomass-cofiring.

Does the GREET model's realistic treatment of real differences in lifecycle GHG emissions for corn ethanol make the LCFS violate the Commerce Clause? In the view of NRDC, the answer is no. The LCFS does not facially (or otherwise) discriminate against out-of-state ethanol or crude oil. The LCFS evenhandedly regulates all transportation fuels sold in California based on lifecycle emissions, not on location. California's carbon calculations apply the same to the lifecycle emissions of all fuels, including the emissions needed to refine and transport those fuels. The GREET tool applies whether the fuel is made in California or elsewhere. To ignore the fact that, for example, much Midwest electricity comes from coal is to ignore reality.

Standing up from the weeds, is the Commerce Clause really a bar to a state that wants to

protect its land and people from climate change by reducing GHG emissions caused by its people? Construing a state regulation as "environmental" doesn't insulate it from Commerce Clause review, as the town of Clarkstown, New York found out in *C&A Carbone, Inc. v. Town of Clarkstown*, N.Y., 511 U.S. 383 (1994). Here, if looking at lifecycle GHG emissions falls, the LCFS will fall and California will need to scramble to fill the hole left in AB32 compliance. The alternative proposed by Judge O'Neill, a carbon tax, misses the mark because it is based on the carbon content of a fuel and ignores GHG emissions from how that fuel was produced. As some Legal Planet readers undoubtedly know, a gallon equivalent of fuel made from tar sands, conventional oil, corn ethanol, or cellulosic ethanol will have virtually the same carbon emission from combustion but very different lifecycle emissions due to the differences from producing these fuels.

Some people have asked what the effect will be of Judge O'Neill's decision, if upheld, on California's cap and trade and renewable portfolio systems. The answer is, not much. The cap and trade regulations and renewable standard are designed and implemented under entirely different frameworks. These standards are based on legitimate state interests in reducing emissions, providing grid security and improving public health. For example, the cap and trade regulations deal with GHG emissions from out-of-state power production by regulating the entity that first delivers power into the state. That entity is treated no differently than an in-state entity in terms of having to reduce its GHG emissions. The renewable portfolio standard is designed to promote renewable energy while maintaining a reliable grid. It regulates only in-state utilities and their mix of power. Regardless of what the Ninth Circuit concludes about the LCFS, the renewable standard and cap and trade systems are too different to be implicated by the LCFS ruling.

CARB, NRDC and the other intervenors hope to have these issues resolved on a fast track in the Ninth Circuit. Stay tuned.

David is a UCLA Law grad and a Senior Attorney for the Natural Resources Defense Council in Santa Monica, CA. David is the lead attorney for NRDC in the current litigation over California's low carbon fuel standard.