EPA Confirms 2011 Biofuels Mandate; Brazil the Winner?

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In Washington, the U.S. Environmental Protection Agency finalized the 2011 percentage standards [1]for the four fuels categories under the agency's Renewable Fuel Standard program, known as RFS2.

In July, the EPA indicating in a draft ruling that it would specify a range of 6-25 million gallons of cellulosic ethanol, and finalized its mandated volumes at 6.6 million gallons, way, way down from the 250 million gallons of cellulosic biofuels originally envisioned for 2011 in the 2007 Energy Independence and Security Act.

The Actual Mandated Volumes

Cellulosic biofuel, 6.6 mill gal
Biomass-based diesel, 800 million gallons
Advanced biofuel (towards which which both biomass-based diesel and cellulosic biofuel volumes apply), 1.35 billion gallons
Renewable fuel, 13.95 billion gallons

What Happened?

Here's the EPA's rationale:

"We first considered whether it appears likely that the required biomass-based diesel volume of 0.8 billion gallons can be met with existing biodiesel production capacity in 2011…we believe that the 0.8 billion gallon standard can indeed be met…Of the remaining 0.15 bill gallons, up to 0.026 bill gallons would be met with the proposed volume of cellulosic biofuel. Based on our analysis as described in Section II.C, there may be sufficient volumes of other advanced biofuels, such as

imported sugarcane ethanol, additional biodiesel, or renewable diesel, such that the standard for advanced biofuel could remain at the statutory level of 1.35 billion gallons."

In short, it will be up to blenders to find between 124 and 144 million gallons of qualifying advanced biofuels from imported sugarcane ethanol, additional cellulosic biofuel production, additional biodiesel, or renewable diesel, during 2011, or the blenders can buy appropriate Renewable Information Number (RINs) credits to make up the difference.

OK — Why?

The EPA is matching its mandates to production capacity. The fact that there was only 300 million gallons of biodiesel produced in the US this year is less important than larger numbers in production capacity. The mandate is expected to supply the demand that will begin to absorb that stranded capacity.

The Unsurprising EPA Pull-Back

Back in July, we commented on the 25.5 million gallon potential [2] for cellulosic biofuels that "readers may be surprised to hear that the Bell Bioenergy and Cell Energy projects are projecting up to 20.4 million gallons of production in 2011. Neither project has been much heard from of late. The Bell Bioenergy website hasn't been updated, for example, in nearly 18 months with any project information, and Cello Energy hasn't been heard of at all in the industry since principals of the company suffered a fraud judgment last year in connection with its investment history. At one point back in 2008, Cello was projected to supply 75 million gallons towards the 2010 mandate, and it was primarily the delay in this project that caused the cellulosic biofuel mandate to be waived down last year."

The Good News

So where are some of the higher-profile projects in cellulosic biofuel, like INEOS Bio, AE Biofuels commercial-scale project, POET's Project Liberty, Dynamic Fuels, Range Fuels, Enerkem, Gevo and others that are expected to come online?

Well, the Digest did a check-around, and it appears that, in general, the EPA has it right in terms of actual production in 2011, at least that projects are willing to commit to. POET's Project Liberty is scheduled to open in early 2012, AE Biofuels and INEOS Bio are not giving specific commitments on the timing of their expansions (preferring to underpromise and overdeliver), and Iogen's 23 Mgy project does not appear to be in position to be completed before the very end of the year (if then, depending on financing).

As for reasons why it has not come along faster, there are three factors. First, technological uncertainty. Second, the failure in the banking sector, combined with the failure of the DOE Loan Guarantee program. Third, the momentum gathering with competing biofuels.

The Coskata Perspective

“It is important to note that the EPA did not waive the total volume of advanced biofuels that need to be blended in 2011. The 240 million gallon shortfall of cellulosic biofuels was simply added onto the 1.15 billion gallons of advanced biofuels in 2011 to keep the total at 1.35 billion gallons,” said Wes Bolsen, chief marketing officer and vice president of government affairs for Coskata. “This is a major commitment from them, and a sign to obligated parties that they need to start building plants now if they want to even come close to meeting the 2015 mandate of 5.5 billion gallons of total advanced, and 21 billion gallons in 2022. The new RFS II numbers further demonstrate that the industry needs enduring government support that not only gives investors certainty in the long term market value of cellulosic biofuels, but perhaps more importantly, helps motivate investment in the short-term around the construction of commercial scale facilities,” Bolsen added.

Growth Energy’s Take

“There’s no question that the potential for cellulosic ethanol remains on track,” Growth Energy said in a prepared statement. “That is why it is so important to have real targets to give confidence that there will be a market for those who are investing in the industry. Some of the pilot projects are on the edge of delivering commercial-scale volumes of cellulosic ethanol to the market, for a price that is competitive to gasoline. But not all pilot projects are that close, and that’s in large part because the market for ethanol is capped by arbitrary regulation in the U.S. What’s preventing the growth of cellulosic ethanol in the transportation fuels market is the lack of access to the market – and without that market, we’re not drawing the necessary investment. That’s why Growth Energy is pushing our Fueling Freedom proposal, which would reform market access and let cellulosic ethanol compete with gasoline derived from foreign oil.”

The Real Winner: Brazil

At the Digest, we note along with Coskata that the EPA did not back down from their overall 1.45 billion gallon advanced biofuels mandate. But we are not sure we agree with Coskata that it is “a sign to obligated parties that they need to start building plants now if they want to even come close to meeting the 2015 mandate of 5.5 billion gallons of total advanced, and 21 billion gallons in 2022.”

We suspect that the real winner is not the US cellulosic ethanol industry, but rather first-generation Brazilian biofuels.

Catchlight Energy is theorizing that there is no way to hit the advanced biofuels standard set by the Congress in the next few years and that instead of paying the “tax penalty” for not hitting the goal, oil companies will simply buy ethanol from Brazil because it is cheaper than paying the tax. Brazilian ethanol qualifies as an advanced biofuel.

Brazilian Producers Register with EPA as Advanced Biofuels Producers

We note that, from Brazil, Cargill, Della Coletta Bioenergia, Asucar Guarani, LDC Bioenergia and four mills that are part of the Copersucar association registered in the past week with the EPA as advanced renewable fuel producers. Ethanol from Brazil is still subject to a tariff, but the tariff was devised originally as an offset to the ethanol tax credit – thereby ensuring that US taxpayer dollars were not subsidizing Brazilian ethanol production. With the ethanol tax credit in danger of a substantial cut – and we have heard figures as low as thirty cents per gallon – there may be pressure to lower the Brazilian ethanol tariff. That may clear the way for the entry of low-cost Brazilian ethanol to supply the growing volumes of advanced biofuel under the Renewable Fuel Standard.

Another Option — Renewable Diesel

The Dynamic Fuels project in Geismar, Louisiana, for example, is now complete and has a nameplate capacity of 75 million gallons of renewable diesel made from animal residues. It's a long-awaited commercial launch from the JV owned by Tyson and Syntroleum. Should the production come online at full nameplate capacity, and qualify under the advanced biofuels category (with a 50 percent overall reduction in GHG emissions), there's 112 million gallons right there.

Neste Oil's renewable diesel plant in Singapore, a 275 million gallon monster, is said to be preparing to export in large quantities to California, where the Low Carbon Fuel Standard imposes even stricter requirements on qualifying biofuels, and knocks out even some Midwestern ethanol using today's ILUC penalties.

The Two Parity Price Benchmarks for Advanced Biofuels

We'll see over the next few years how the buying patterns shake out, but we suspect that there will be two major benchmarks for advanced-generation fuel producers to hit. First, if they reach parity pricing with Brazilian ethanol (plus the tariff, if any), the Renewable Fuel Standard will provide a mrskt for them. If they reach parity with oil, then the broader market opens to them.

The When & Why of 'Steel in the Ground'

With the volumes in scope for the long-term RFS, for sure Coskata is right. There aren't 21 billion gallons of excess ethanol capacity in Brazil or biodiesel capacity in the US, or anywhere else. If the EPA holds to its overall annual mandates, new plant construction will absolutely be required to add the capacity required. We may see Brazilian ethanol and excess biodiesel capacity filling up the mandates between now and 2013 or so, as US advanced biofuels capacity ramps up and costs come down.

After that, an emboldened EPA sticking to its guns on the mandate, may find itself with a whole raftful of production options to meet mandates, and that's good news for advanced biofuels, jobs, energy security and emissions.

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