



U.S. Renewable Fuels and Projected Industry Growth

Support for Biofuels

Interest in the use of biofuels has existed for a long time. As early as 1978, the U.S. government began providing financial support for the biofuel industry through a \$ 0.40 per gallon payment for 1 gallon of ethanol blended with 9 gallons of gasoline to make gasohol (E10). Through various government programs, this financial support has been available for the past 30 years. Support for the biofuel industry was strengthened through the Energy Policy Act of 2005, which established the first Renewable Fuel Standard (RFS) and mandated 4 billion gallons in 2006. In addition, a blender tax credit of \$0.51 cents per gallon of ethanol, as well as a tariff (\$ 0.54 per gallon) on foreign imports of ethanol was established. Renewable fuels are defined in the Energy Policy Act as a motor vehicle fuel that is produced from plant or animal products or wastes, and is used to replace or reduce the quantity of fossil fuel present in a fuel mixture used to operate a motor vehicle. Renewable fuels include ethanol, biodiesel, and other motor vehicle fuels made from renewable sources.

An even stronger push for renewable fuels was provided in December 2007 when the final version of the Energy Independence and Security Act of 2007 (EISA) was signed by President George W. Bush. Within the EISA, the new RFS schedule (Table 1) calls for a minimum of 9 billion gallons of ethanol to be used nationwide in 2008, 20.5 billion gallons by 2015, and a total of 36 billion gallons by 2022. Of the 36 billion gallons of renewable fuels produced by 2022, 21 billion gallons is to come from advanced biofuel, which is defined as renewable fuel, other than corn-based ethanol, with lifecycle greenhouse gas emissions that are at least 50% less than greenhouse gas emissions produced by gasoline or diesel. The major projected source of this ethanol boom will be cellulosic feedstock such as native grasses, crop residues, forestry waste, etc.

The combination of domestically produced corn- and cellulose-based ethanol will serve the purpose of displacing a sizeable portion of the nation's consumption of fossil fuel-based gasoline. As incentive, programs grant credit for both renewable fuels blended into conventional gasoline or diesel and those used in their neat (unblended) form as motor vehicle fuel. Commonly referred to as the "blender's credit," the Volumetric Ethanol Excise Tax Credit (VEETC) was continued with the EISA to provide oil companies with an economic incentive to blend ethanol with gasoline. The tax credit of \$0.51 per gallon on pure ethanol was reduced to \$0.46 per gallon with the signing of the 2008 Farm Bill.

Table 1. Renewable Fuel and Advanced Biofuel Requirements ^{1,2}

| Calendar Year | Volume of Renewable Fuel | Volume of Advanced Biofuel |
|---------------|--------------------------|----------------------------|
| 2006 | 4.00 | |
| 2007 | 4.70 | |
| 2008 | 9.00 | |
| 2009 | 11.10 | 0.60 |
| 2010 | 12.95 | 0.95 |
| 2011 | 13.95 | 1.35 |
| 2012 | 15.20 | 2.00 |
| 2013 | 16.55 | 2.75 |
| 2014 | 18.15 | 3.75 |
| 2015 | 20.50 | 5.50 |
| 2016 | 22.25 | 7.25 |
| 2017 | 24.00 | 9.00 |
| 2018 | 26.00 | 11.0 |
| 2019 | 28.00 | 13.0 |
| 2020 | 30.00 | 15.0 |
| 2021 | 33.00 | 18.0 |
| 2022 | 36.00 | 21.0 |

¹ See [Website](#).

² in billions of gallons

