

Issue Brief

E15 and the Renewable Fuel Standard

Background

In 2005 Congress passed the Renewable Fuel Standard (RFS), setting mandatory levels of renewable fuel that must be blended into gasoline each year. The measure had wide bipartisan support and aimed to alleviate dependency on foreign oil while investing and advancing the development and use of biofuels. As originally written, corn-based ethanol was meant to be used as a bridge-fuel until the development of other biofuels occurred.

Since 2005 gasoline usage in the United States has leveled off, something not anticipated in the original RFS legislation. The amount of ethanol mandated under the RFS to blend into fuel, however, continues to escalate. Because there are fewer gallons of gas to blend with the mandated increased amounts of ethanol, the nation has hit the “blend wall” or the point at which we can no longer blend ethanol into gasoline at levels safe for all engines. In order to comply with the growing mandate, in 2010 the EPA approved the use of gasoline containing up to 15% ethanol (E15) for some engines – cars and light trucks 2001 and newer. E15 is now available in at least 23 states. However, this fuel is prohibited from use in marine engines, motorcycles, snowmobile, and small engines such as lawn mowers and vehicles manufactured before 2001.

Issue

Currently there is not a single marine engine warrantied to run on E15. Marine engine tests run by the National Renewable Energy Laboratories and the Department of Energy in October 2011¹ on four new 2 and 4 stroke engines showed that significant temperature increases occurred using E15, as well as piston damage, misfiring, cracked valves and deterioration of gaskets. With the potential to have both E10 and E15 dispensed from the same local fuel pumps, boaters are at risk of mis-fueling and voiding their warranty.

Status

Several bills have been introduced in Congress to reform or repeal the RFS and limit the amount of ethanol required to be blended into our gas. Additionally, the Environmental Protection Agency has set the mandated amounts of ethanol that must be blended into the nation’s fuel supply for 2017. In our assessment, these mandate ethanol levels will force more E15 on to the market. The mandates may also decrease the amount of ethanol free gasoline available for those who prefer it.

Position

BoatU.S. has long recognized that renewable fuels help decrease our reliance on foreign fuels and are a key part of America's energy solution. The introduction of E10 into now >90% of the nation's gasoline has not been an easy one for many boat owners who have experienced clogged fuel filters, unreliable engines performance and in some cases severely damaged engines due to ethanol's solvent and hydrophilic characteristics. While many boaters have learned to live with E10, introducing higher levels of ethanol in U.S. gasoline raises serious concerns for the dependability and durability of millions of marine engines.

E15 was approved by the EPA to be available at gas stations in 2011, however, there are no marine engines warrantied to run on this fuel. With E15 fuel now available in at least 23 states and often offered as the least expensive fuel option, a boater could easily misfuel and suffer engine failure and/or damage.

As a result of the potential for significant marine engine failure or damage from the use of E15 and resulting impacts for boating safety, BoatU.S. is seeking to reform the RFS. By supporting legislation to bring mandated volume requirements of ethanol in line with consumer gasoline usage, we can support the development of more compatible biofuels and ensure this policy is not mandating unsafe amounts of ethanol in our fuel.

Staff Contact: David Kennedy, dkennedy@boat.us 703-461-2878

ⁱ www.nrel.gov/docs/fy12osti/52909.pdf