



PennState

**AGRICULTURAL AND
BIOLOGICAL ENGINEERING**

Fall Seminar 2018

“U.S. Retail Fuel Companies’ Perceptions Regarding the Adoption-diffusion of Higher Ethanol Fuel Blends”

Due to climate change concerns and related greenhouse gas (GHG) emissions from combustion of fossil fuels, the U.S. federal government has established a variety of mechanisms to encourage renewable transportation fuels, such as corn-grain ethanol, into the petro-gasoline transportation fuel supply chain. In 2017, nearly 16 billion gallons of corn-grain ethanol accounted for approximately 10 percent of the total U.S. transportation fuel supply, but is currently constrained by the maximum 10 percent blend allowed in E10 fuels, referred to as the “blend wall”. To increase the amount of ethanol sold per year, the EPA approved the sale of E15 fuel (10.5-15% corn-grain ethanol and 89.5-85% petro-gasoline) for 2001 and newer light-duty vehicles. However, E15 fuel may be viewed as a competitive threat by the oil refining industry and branded fuel retailers and an emerging market opportunity for ethanol producers and unbranded fuel retailers. As a result, challenges remain regarding the expansion of E15 into the retail fuel industry. This paper explores the ranking of perceived drivers and barriers regarding the adoption and diffusion of E15 into unbranded and branded retail fuel companies’ stations.

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