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INSIGHT

Year-Round Sale of E15

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E15—a fuel blend of up to 15% ethanol and 85% gasoline—generally cannot be sold during the summer driving season (June 1–September 15) because it does not meet the gasoline Reid Vapor Pressure (RVP) requirements, which limit fuel volatility under the Clean Air Act (CAA). The statute allows the U.S. Environmental Protection Agency (EPA) Administrator to issue a temporary fuel waiver of these requirements (42 U.S.C. §7545(c)(4)(C)(ii)) effective for up to 20 days. On April 28, 2023, the Biden Administration announced that it would allow E15 to be sold nationwide during the 2023 summer driving season. EPA issued seven nationwide emergency fuel waivers that allowed E15 to be sold from May 1, 2023, through September 15, 2023. EPA reported it took this action, in part, due to disruptions in the supply and distribution of crude oil and petroleum products for the United States caused by the Russia-Ukraine war, reductions in crude oil output announced by the Organization of the Petroleum Exporting Countries (OPEC), and reduced U.S. refining capacity.

Some Members of Congress have called for a permanent year-round sale of E15 (most recently, as per S. 2707). As Congress considers this issue, some states have undertaken a measure allotted to them under the CAA. In April 2022, eight states petitioned EPA for a permanent waiver to sell E15 year-round (via an exclusion from the ethanol waiver, see 42 U.S.C. §7545(h)(5)). In March 2023, EPA issued a proposed rule to approve the permanent waiver for those states with an effective date of April 28, 2024. EPA reports it is proposing a 2024 effective date "after determining that a 2023 implementation would result in insufficient supply of gasoline in the petitioning states." Some stakeholders have petitioned EPA to delay implementation of the states' request. For example, a stakeholder requested a delay of at least one additional year if EPA grants the states' request, as they anticipate "requesting additional time to ensure members have the time needed to design, capitalize, and construct the infrastructure necessary to ensure systems are in place to meet any new requirements." In August 2023, two states sued EPA for failure to respond to their petition for a permanent waiver. In September 2023, EPA reported to the press that their goal is "to try to finalize the rule before the end of the calendar year." EPA has not issued the final rule.

Clean Air Act RVP Requirements

The CAA authorizes the EPA Administrator to regulate fuels and fuel additives. Among other pollutants, the CAA regulates precursors for ground-level ozone (a primary component of "smog"), which negatively impacts human health and welfare among other environmental effects. One of the requirements intended

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to reduce smog is a limit on gasoline volatility because volatile organic compounds within gasoline evaporate more readily at higher temperatures and can contribute to smog formation. RVP is a common metric of gasoline volatility; the lower the RVP, the less the gasoline will evaporate. RVP requirements in Section 211(h) of the CAA—which apply to the 48 contiguous states and the District of Columbia—generally prohibit the sale of gasoline with an RVP greater than 9 pounds per square inch (psi) during the high ozone season (i.e., the summer months).

The act provides some exceptions, including a waiver—the "one pound waiver"—stipulating that ethanol-gasoline fuel blends containing 10% ethanol (E10) are subject to a RVP limit that is 1 psi greater than what would otherwise apply given certain conditions (e.g., the 9.0 psi standard for certain areas would subject E10 to a 10.0 psi limit). Further, the act provides exclusions from the waiver such that, upon notification by a governor that the RVP limit granted for E10 will increase air pollutant emissions in that state, the Administrator must revert to the 9 psi limit for that area. In some areas of the country, generally based on nonattainment for ozone, more stringent RVP limits apply (e.g., 7.8 psi RVP for conventional gasoline), with the one pound waiver added on. The waiver does not apply to reformulated gasoline (RFG); there is a 7.4 psi RVP standard for RFG. EPA reports the waiver "also does not apply in areas where EPA has approved a regulation into a state implementation plan (SIP) that limits the applicability of the 1.0 psi allowance." The regulations for gasoline RVP standards are available at 40 C.F.R. §1090.215.

E15

E15 has had a short tenure as a motor vehicle fuel relative to conventional gasoline and E10. In 2011, EPA approved the use of E15 in model year 2001 and newer light-duty motor vehicles, and issued regulations to mitigate the misfueling of vehicles, engines and equipment with E15. E15 may not be used in motorcycles, vehicles with heavy-duty engines (e.g., delivery trucks), nonroad vehicles (e.g., boats) and engines in nonroad equipment (e.g., lawnmowers). The U.S. Department of Agriculture (USDA) reports that "approximately 96 percent of the vehicles on the road today, roughly 290 million, are legally approved to use E15."

There is limited information from federal sources about how E15 is used, pricing, and what impact it may have on the U.S. economy. The U.S. Department of Energy (DOE) reports that E15 is available in 31 states at more than 2,500 fueling stations; this is approximately 1.5% of the 168,000 retail locations in the United States that sell fuel to the public. The Energy Information Administration (EIA) does not track the amount of ethanol consumed as E15, nor does EIA track the daily price of E15. EIA, which tracks ethanol production and consumption, reported that approximately 15.4 billion gallons of ethanol were produced in 2022, of which approximately 14 billion gallons were consumed.

Ethanol has different fuel properties than gasoline, including a lower energy content (about 30% less per gallon) and a higher octane rating. The Oak Ridge National Laboratory (ORNL) reports that a vehicle will typically go 4-5% fewer miles per gallon running on E15 than on 100% gasoline (although most gasoline sold in the United States currently is E10).

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