HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 569 Diesel Exhaust Fluid
SPONSOR(S): Overdorf and others
TIED BILLS: **IDEN./SIM. BILLS:** SB 1036

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee		Johnson	Vickers
2) Agriculture & Natural Resources Appropriations Subcommittee			
3) State Affairs Committee			

SUMMARY ANALYSIS

The United States Environmental Protection Agency requires diesel exhaust fluid (DEF) to be used in newer diesel engines, including diesel-powered vehicles used for aircraft and airport support. DEF is an exhaust additive that reduces diesel emissions by neutralizing nitrogen oxide into harmless nitrogen gas and water.

In recent years, a number of aircraft have experienced engine shutdowns and other engine operability issues resulting from the contamination of jet fuel due to the inadvertent filling of fuel truck anti-icing injection system reservoirs with DEF instead of fuel system icing inhibitor. The Federal Aviation Administration has made a number of preliminary safety recommendations regarding the use of DEF at airports including additional training and the adoption of best management practices.

The bill requires that DEF be phased out of use at public airports by October 1, 2030. The bill also requires the managers of public airports which utilize certain diesel vehicles to create a DEF safety mitigation and exclusion plan and provides minimum requirements for such plan. The plans must be approved by the regulatory authority having jurisdiction over the airport and be submitted to the Department of Environmental Protection. The airport manager must annually review and resubmit the plan, with any amendments, to the department, until all DEF and vehicles using DEF have been removed from the premises of the airport.

The bill may have an indeterminate negative fiscal impact on the state and local governments. Tenants of public airports may incur expenditures associated with complying with DEF safety mitigation and exclusion plans and the replacement of vehicles and equipment that utilize DEF. *See* Fiscal Analysis for details.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Diesel Exhaust Fluid

As part of the Clean Air Act of 1990, the United States Environmental Protection Agency (EPA) has, in order to curb air pollution, mandated stronger emission control standards for vehicle engines. Nitrogen Oxide (NOx) emissions can be a major polluter from diesel engines and the EPA has targeted them for significant reductions. In 2007, the EPA mandated that all new on-road heavy duty vehicles manufactured after 2010 meet certain requirements, with light duty vehicles to meet these requirements in 2014. In order to meet these standards, technologies such as selective catalytic reduction have been developed.[1]

In diesel vehicles, selective catalytic reduction reduces NOx emissions by injecting diesel exhaust fluid (DEF) into ammonia, which in the presence of the catalyst, reacts with the exhaust NOx to neutralize it into harmless nitrogen gas and water.[2]

DEF is a nontoxic, nonhazardous and colorless aqueous solution of automotive grade Urea in deionized water.[3]

Airport Use of Diesel Exhaust Fluid

At public airports, the airport and its tenants use DEF in various diesel-powered vehicles including aircraft refueling equipment, diesel aircraft fire-fighting equipment, life-saving equipment, and emergency generators.[4]

In recent years, a number of aircraft have experienced engine shutdowns and other engine operability issues due to the contamination of jet fuel as a result of the inadvertent filling of aircraft fuel trucks anti-icing injection system with DEF instead of fuel system icing inhibitor.[5]

Due to fuel system designs, some aircraft require fuel system icing inhibitor to prevent engine operability issues in cold weather. Due to this requirement, for many years, airport refueling trucks have been equipped with fuel system icing inhibitor injections systems, which require a fuel system icing inhibitor fluid reservoir mounted on the truck to supply the injection system during refueling. However, new refueling trucks contain a DEF reservoir in addition to the fuel system icing inhibitor reservoir. Since the EPA's mandate for selective catalytic reduction on non-road diesel trucks began in 2014, airport refueling trucks with two reservoirs have begun appearing at airports.[6]

Between November 2017 and May 2019, there were three instances, two in Florida, in which multiple aircraft had jet fuel contaminated with DEF or were refueled using equipment exposed to DEF. Because of these instances, numerous aircraft had to perform emergency landings. The Federal Aviation Administration (FAA) conducted a hazard analysis, and issued preliminary recommendations to address the problem, including additional training for ground support crews, adoption of best management practices, and dying either DEF or fuel system icing inhibitor so they can be distinguished from each other.[7] One recommendation called for the aviation industry to request that EPA issue

[1] Aircraft Diesel Exhaust Fluid Contamination Working Group, *A collaborative Industry Report on the Hazard of Diesel Exhaust Fluid Contamination of Aircraft Fuel*, June 11, 2019. P. 3-4 (Copy on file with Transportation & Infrastructure Subcommittee).
[2] *Id.*
[3] *Id.*
[4] Email from Lisa Waters, President/CEO Florida Airports Council, Diesel Exhaust Fluid, Nov. 4, 2019. (Copy on file with Transportation & Infrastructure Subcommittee).
[5] Federal Aviation Administration, *Safety Assessment for Jet Fuel Contamination with Diesel Exhaust Fluid.* August 30, 2019. P.4. (Copy on file with Transportation & Infrastructure Subcommittee).
[6] *Id.*
[7] *Id.*

permanent relief from emission control/system performance inducements (which require the use of DEF) for any non-road diesel engine powered vehicles at or on airports.[8]

Effect of the Bill

The bill requires that, by October 1, 2030, the presence, storage, or use of DEF, including the use of DEF to treat the exhaust of a selective catalytic reduction engine, on the premises of a public airport[9] must be phased out.

The bill requires the manager at each public airport where aviation fuels receive onsite treatment with fuel system icing inhibitors, and any aircraft fuel delivery vehicle or ground service equipment treated with DEF is operated within 150 feet of any aircraft to create a DEF safety mitigation and exclusion plan.

At a minimum, the DEF safety mitigation and exclusion plan must include:

- A full inventory of all DEF on the airport's premises.
- Designation of specific areas where DEF is to be stored on the airport's premises. Such areas may not be located within or on a vehicle operated for the fueling or servicing of aircraft or at any aviation fuel transfer facility or bulk aviation fuel storage facility.
- Designation of specific areas where a vehicle the exhaust system of which is being treated with DEF is to be refueled or treated with such fluid. Such areas must be segregated from all aircraft operating areas.

By September 30, 2020, the regulatory authority having jurisdiction over the airport must approve the DEF safety mitigation and exclusion plan. By October 1, 2020, the manager must submit the plan to the Department of Environmental Protection (DEP) and certify that all such fluid and vehicles have been secured within the premises of the airport.

By January 1, 2021, the DEF safety mitigation and exclusion plan must be fully implemented on the premises of the airport. Each year thereafter, the manager must review the plan and submit the plan, including applicable amendments, to DEP for certification. If DEP determines that the use of DEF is being phased out, DEP must certify the plan for that year.

Once all DEF and all vehicles the exhaust system of which were being treated with such fluid have been removed from the premises of the airport, the manager must submit a written report to DEP certifying such removal. If DEP determines that such removal has been accomplished, the annual certification is no longer required.

The presence, storage, or use of DEF on the premises of a public airport is prohibited after October 1, 2030.

B. SECTION DIRECTORY:

Section 1 creates s. 330.401, F.S., providing for the phase-out of diesel exhaust fluid; reports and certification; prohibition.

Section 2 provides an effective date of July 1, 2020.

[8] *Id.* at 2

[9] Section 330.27(6), F.S., defines the term "public airport" as an airport, publicly or privately owned, which is open for use by the public.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

   The bill does not appear to impact state government revenues.

2. Expenditures:

   There is an indeterminate, but likely insignificant fiscal impact to DEP associated with reviewing and certifying airport plans regarding the use of DEF.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

   The bill does not appear to impact local government revenues.

2. Expenditures:

   There is an indeterminate, but possibly negative fiscal impact to local governments operating public airports associated with reporting requirements and the possible replacement of vehicles and equipment that require the use of DEF.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

Tenants of public airports, including fuel providers, will likely incur expenditures associated with complying with the DEF safety mitigation and exclusion plan, and the possible replacement of vehicles and equipment that utilize DEF.

D. FISCAL COMMENTS:

Public airports and their tenants may have significant investments in vehicles and equipment utilizing DEF. The required phase-out of the use of DEF may render some of this equipment inoperable and require public airports and their tenants to replace this equipment. Additionally, there may not be replacement equipment available that does not utilize DEF.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

   The county/municipality mandates provision of Art. VII, section 19 of the Florida Constitution may apply because the bill requires public airports to develop DEF safety mitigation and exclusion plans; however, an exemption may apply since there is likely an insignificant fiscal impact.

2. Other:

   None.

B. RULE-MAKING AUTHORITY:

This bill does not grant rulemaking authority, nor does it require rulemaking authority.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

None.