



Updated February 1, 2023

The Diesel Emissions Reduction Act (DERA) Program

Emissions from diesel engines—especially particulate matter (PM), nitrogen oxides (NO_x), sulfur oxides, and air toxics—have been shown to contribute to air pollution that adversely impacts public health and welfare in the United States. Since 1970, the Clean Air Act (CAA; 42 U.S.C. §§7401 et seq.) has required the federal government to limit these emissions, among others, from new stationary (industrial) sources and new mobile sources. In the decades since, the U.S. Environmental Protection Agency (EPA) has promulgated emission standards for a variety of source categories, including new heavy duty highway and nonroad diesel engines.

EPA finalized the most recent set of emission standards for newly manufactured heavy duty highway vehicles and engines in January 2023 (88 *FR* 4296). The standards require an approximately 80% reduction in NO_x emission levels over the previous standards, to begin in model year (MY) 2027. However, because of the long operational lives of diesel engines, millions of older vehicles remain in use. The CAA does not provide EPA the authority to set new emission standards on existing, or “legacy,” diesel engines. To address these concerns, EPA began a Voluntary Diesel Retrofit Program in 2000 and a Clean School Bus Initiative in 2003, among other programs.

Congress enacted the “Diesel Emissions Reduction” program in the Energy Policy Act of 2005 (EPAct 2005; P.L. 109-58, Title VII, Subtitle G §§791-797; 42 U.S.C. §§16131-16137). It authorized EPA to administer a national and state-level grant and loan program to promote emissions reductions from legacy diesel engines. Through the Diesel Emissions Reduction program (as amended), EPA has provided loans, grants, and rebates to projects that use certified engine configurations and verified technologies, or that develop and commercialize emerging technologies, in order to replace legacy diesel engines.

Energy Policy Act of 2005

EPAct 2005 authorized \$200.0 million annually for FY2007-FY2011 for the Diesel Emissions Reduction program. Of the funds appropriated, 70% were to be used for national competitive grants and low-cost loans administered by EPA, and 30% were to support loan and grant programs administered by states. Of the funds administered by EPA, the majority was to be provided for the benefit of public fleets, with not less than 90% going to projects using a certified engine configuration or verified technology and not more than 10% for the development and commercialization of emerging technologies. Of the funds administered by the states, a portion was to be allocated in equal shares to each state if all 50 states qualified. If fewer than 50 states qualified, the remaining funds were to be allocated among the qualifying states proportionally based on their population.

Under EPAct 2005, EPA was to prioritize projects that (1) maximize public health benefits; (2) are cost-effective; (3) serve areas with the highest population density and the poorest air quality; (4) include a certified engine configuration, verified technology, or emerging technology that has a long expected useful life; (5) maximize the engine’s expected useful life; (6) conserve diesel fuel; and (7) use diesel fuel with a sulfur content of 15 parts per million or less.

Diesel Emissions Reduction Act of 2010

The Diesel Emissions Reduction Act of 2010 (DERA; P.L. 111-364) amended EPAct 2005 to authorize \$100.0 million annually through FY2016 and modify provisions related to the program. DERA defined *state* to include the District of Columbia and the U.S. territories. The act authorized EPA to offer rebates in addition to grants and loans to eligible entities, including any private individual or entity that owns a diesel vehicle or fleet. It revised the distribution of funds to provide not less than 95% of funds to projects using a certified engine configuration or verified technology and not more than 5% of funds for development and commercialization of emerging technologies. Under the act, EPA was to develop a simplified application process to expedite provision of funds, taking into consideration special circumstances affecting small fleet owners. The act expanded the priority given to applications that serve areas receiving a disproportionate quantity of air pollution from diesel fleets to include construction sites and schools in addition to truck stops, ports, rail yards, terminals, and distribution centers.

In 2020, the DERA program was reauthorized through FY2024, with no other changes, under Division S, Section 101, of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

DERA Program Implementation

EPA’s National Clean Diesel Campaign within the Office of Transportation and Air Quality administers the DERA program. In its *DERA Fifth Report to Congress* (August 2022), EPA reports that it awarded more than \$801.0 million between FY2008 and FY2018 to retrofit or replace 73,700 engines in vehicles, vessels, locomotives, and other equipment. EPA estimates that the program has resulted in the reduction of emissions of NO_x by 491,000 tons, PM by 16,800 tons, and carbon dioxide by 5.3 million tons over the lifetime of the affected engines. Further, EPA estimates the total present value of monetized health benefits over the lifetime of the affected engines as \$8.0 billion, including up to 850 fewer premature deaths. EPA reports that since the inception of the program, DERA funding requests have exceeded availability by as much as 35:1 for the rebate program and 7:1 for the national grant competition.

Appropriations

Table 1 presents requested and enacted EPA appropriations for the DERA program—adjusted and not adjusted for inflation (FY2021\$)—for FY2007-FY2023. Funding for DERA is provided within EPA’s State and Tribal Assistance Grants appropriations account. As indicated in **Table 1**, FY2009 enacted included \$60.0 million plus additional \$300.0 million in Title VII of Division A of P.L. 111-5, the American Recovery and Reinvestment Act of 2009. Following the \$60.0 million requested for FY2011, the Obama Administration requested no funding for FY2012 and FY2015, citing limitations associated with budget constraints. Both the Obama and Trump Administrations requested reduced funding for the other years between FY2013 and FY2021.

In FY2022, the incoming Biden Administration increased the request for the DERA program substantially—to \$150.0 million—to support efforts “in advancing environmental justice and tackling the climate crisis.” Under these objectives, EPA is to “look for ways to help expedite [the] transition [to more zero emissions options] as part of its DERA implementation effort,” and to “target 40 percent of the benefits of climate investments to disadvantaged communities.”

Title II of Division G of the Consolidated Appropriations Act, 2023 (P.L. 117-328), appropriated \$100.0 million for the DERA program for FY2023.

Infrastructure Investment and Jobs Act

As part of the Infrastructure Investment and Jobs Act of 2021 (IIJA; P.L. 117-58), Title XI of Division G included a Clean School Bus Program, which provides \$5 billion for FY2022-FY2026 for the replacement of existing school buses with clean and zero-emission school buses and eligible fueling and charging infrastructure. Of this funding, \$500 million annually is available to fund only zero-emission school buses and \$500 million annually is available to fund zero-emission and clean school buses (*clean* is defined as a vehicle that “reduces emissions and is operated entirely or in part using an alternative fuel”). EPA administers the funding for the related but distinct Clean School Bus Program through the National Clean Diesel Campaign. This funding is not reflected in **Table 1**.

Inflation Reduction Act

As part of the 2022 budget reconciliation measure commonly referred to as the Inflation Reduction Act (IRA; P.L. 117-169), Section 60104 included \$60 million for the DERA program, specifically “to identify and reduce diesel emissions resulting from goods movement facilities, and vehicles servicing goods movement facilities, in low-income and disadvantaged communities.” Further, IRA Section 60101 included a related but distinct “Clean Heavy Duty Vehicles” program, which provides \$1.0 billion to be available through FY2031 and instructs EPA to implement a program for grants and rebates to eligible recipients for the incremental cost of zero-emission vehicle replacements, fueling and charging infrastructure, and workforce development. EPA is in the process of establishing the Clean Heavy Duty Vehicle program. This funding is not reflected in **Table 1**.

Table 1. DERA Appropriations: Requested and Enacted, FY2007-FY2023
(\$ millions; not adjusted and adjusted for inflation [FY2021\$])

| Fiscal Year | Requested | | Enacted | |
|-------------------|--------------|--------------------|--------------|--------------------|
| | Not Adjusted | Inflation Adjusted | Not Adjusted | Inflation Adjusted |
| 2007 | \$49.50 | \$62.80 | a | a |
| 2008 | \$35.00 | \$43.50 | \$49.22 | \$61.17 |
| 2009 ^b | \$49.22 | \$60.56 | \$360.00 | \$442.92 |
| 2010 | \$60.00 | \$73.18 | \$60.00 | \$73.18 |
| 2011 | \$60.00 | \$71.74 | \$49.90 | \$59.66 |
| 2012 | \$0.00 | \$0.00 | \$29.95 | \$35.16 |
| 2013 | \$15.00 | \$17.30 | \$18.91 | \$21.80 |
| 2014 | \$6.00 | \$6.79 | \$20.00 | \$22.62 |
| 2015 | \$0.00 | \$0.00 | \$30.00 | \$33.55 |
| 2016 | \$10.00 | \$11.09 | \$50.00 | \$55.46 |
| 2017 | \$10.00 | \$10.90 | \$60.00 | \$65.38 |
| 2018 | \$10.00 | \$10.65 | \$75.00 | \$79.86 |
| 2019 | \$10.00 | \$10.44 | \$87.00 | \$90.87 |
| 2020 | \$10.00 | \$10.31 | \$87.00 | \$89.67 |
| 2021 | \$10.00 | \$10.00 | \$90.00 | \$90.00 |
| 2022 ^c | \$150.00 | \$144.36 | \$152.00 | \$146.28 |
| 2023 | \$150.00 | \$141.28 | \$100.00 | \$94.18 |

Source: CRS, with data from Congress.gov, the *Congressional Record*; House, Senate, conference committee reports and tables, and EPA’s FY2013 Operating Plan (reflects rescissions and the sequestration).

Notes: Inflation adjusted for FY2021\$ using deflators presented in White House Office of Management and Budget, *Budget of the United States Government*, Table 10.1. Adjustments for FY2022 and FY2023 are estimated.

- \$6.90 million appropriated for Clean School Bus Initiative in FY2007.
- FY2009 enacted includes \$60.00 million plus additional \$300.00 million in Title VII of Division A of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).
- FY2022 enacted includes \$92.00 million from the Consolidated Appropriations Act, 2022 (P.L. 117-103), and \$60.00 million from the budget reconciliation measure commonly referred to as the Inflation Reduction Act (P.L. 117-169). Further, beginning in FY2022 and continuing through FY2026, the Infrastructure Investment and Jobs Act of 2021 (P.L. 117-58) provides \$1.00 billion annually for a Clean School Bus Program for FY2022-2026. Also, beginning in FY2022 and available through FY2031, the Inflation Reduction Act provides \$1.00 billion in total for a Clean Heavy Duty Vehicle program. Funding for these two related but distinct programs is not reflected in this table.

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